



**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 1 OF 3

BID BOOKLET

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

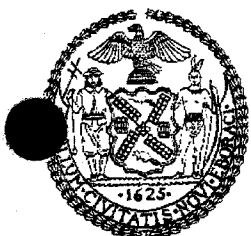
**INCLUDING SEWER, WATER MAIN, STREETSCAPING,
STREET LIGHTING, AND TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
URS CORPORATION

FEBRUARY 28, 2012



3-036



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

DAVID J. BURNEY, FAIA
Commissioner

CAROL DIAGOSTINO
Agency Chief
Contracting Officer

November 20, 2013

CERTIFIED MAIL - RETURN RECEIPT REQUEST
TRIUMPH CONSTRUCTION CORP.
1354 Seneca Avenue
Bronx, NY 10474

RE: FMS ID: HWPLZ004M
E-PIN: 85013B0092001
DDC PIN: 8502013HW0043C
RECONSTRUCTION OF PERSHING
SQUARE WEST AT PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET -
BOROUGH OF MANHATTAN
NOTICE OF AWARD

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of \$10,371,035.27 submitted at the bid opening on June 04, 2013. 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,

Lorraine Holley for Carol DiAgostino
Carol DiAgostino

Bid Tab

Description	RECONSTRUCTION OF PERSHING SQUARE WEST AT PARK AVENUE WEST FROM 40TH STREET TO 42ND STREET - BOROUGH OF MANHATTAN		
Bid Date	6/4/2013	FMS ID	HWPLZ004M
Estimated Cost	\$12,996,518.00	DEP Supervised	No
Bid Security	2% of Total Bid Price	PLA	No
Time Allowed	730 CCD	Contract Manager	Giovanni Matos
Addendum	9	Project Manager	Cato, Barbara
PIN	8502013HW0043C	E-PIN	85013B0092
Selective Bidding	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Consultant	URS Corporation

Bid Rank	Vendor	Bid Amount	Security Type
1	TRIUMPH CONSTRUCTION CORP.	\$10,371,035.27	Bond
2	JLJ IV ENTERPRISES INC.	\$10,946,705.75	Bond
3	C.A.C. INDUSTRIES, INC.	\$12,221,777.88	Bond
4	TROCOM CONSTRUCTION CORP	\$14,136,468.11	Bond
5	MFM CONTRACTING CORP.	\$14,493,212.00	Bond
6	PERFETTO CONTRACTING CO. INC.	\$15,553,980.80	Bond
7	TULLY CONSTRUCTION CO. INC.	\$16,591,209.80	Bond

Recorder: Phyllis Lopez – ext. 1283

Approver: 

Bid Tab
Pin: 8502013HW0043C

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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: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

Name of Bidder: Triumph Construction Corp.

Date of Bid Opening: 6/4/13

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

Place of Business of Bidder: 1354 Seneca ave Bronx NY 10474

Bidder's Telephone Number: 718-861-6660 Fax Number: 718-861-6660

Bidder's E-Mail Address: DCuzzi@TriumphConstCorp.com

Residence of Bidder (If Individual): N/A

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

Names of Partners

Residence of Partners

N/A

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: 45 Winchester oval New Rochelle
NY 10805

Name and Home Address of Secretary: _____

Name and Home Address of Treasurer: _____

BID FORM

Triumph Const. Corp.

The above-named Bidder affirms and declares:

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

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

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

Contractor have been finally accepted by the City. In the event of any breach or violation of the foregoing, the Contractor may be subject to damages, liquidated or otherwise, cancellation of the Contract and suspension as a bidder for a period of three years. (The words, "the bidder", "he", "his", and "him" where used herein shall mean the individual bidder, firm, partnership or corporation executing this bid).

6. Compliance Report

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

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

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

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

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

(NO TEXT ON THIS PAGE)

BID FORM

PROJECT ID: HWPLZ004M

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)

\$ 10,371,035.27

6/4/13
P.8

BIDDER'S SIGNATURE AND AFFIDAVIT

WARNING!!! If M/WBE goals have been established for this Contract, you **MUST** complete and submit the Affirmations on the 2nd page of the Subcontractor Utilization Plan (or a pre-approved waiver) at the time you submit your bid. Failure to comply will result in the rejection of your bid.

Bidder: Triumph Const. Corp.

By: [Signature]
(Signature of Partner or corporate officer)

[Signature]

Attest:
(Corporate Seal)

Secretary of Corporate Bidder

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

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:

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

(Signature of the person who signed the Bid)

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

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:

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

(Signature of Partner who signed the Bid)

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

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF Westchester ss:

_____ being duly sworn says:

I am the President of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at 45 Windcrest oval New Rochelle NY 10805. I have knowledge of the several matters therein stated, and they are in all respects true.

[Signature]
(Signature of Corporate Officer who signed the Bid)

Subscribed and sworn to before me this
4 SEPTEMBER 2013

~~NOTARY PUBLIC STATE OF NEW YORK~~
~~No. 01JA60-3625~~
~~Qualified Notary Public~~
~~My Commission Expires August 05, 2014~~

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: Triumph Const Corp
Address: 1354 Seneca Ave
City Bronx State NY Zip Code 10474

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
134050635

By: [Signature]
Signature

Title: President

If a corporation, place seal here

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

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

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Ver 5.00.01



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

Contract PIN 8502013HW0043C
Project ID HWPLZ004M

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 several classes of work 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 5 shall be the product of the Estimated Quantity in Column 2 times the Unit Price Bid in Column 4.
 - (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 - 71

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 BID PAGES



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

Contract PIN 8502013HW0043C
 Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.02 AF-R (001)	4,200.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 2" THICK	\$ 19	00	\$ 79,800	00
4.02 AG (002)	5,000.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	\$ 22	00	\$ 110,000	00
4.02 CB (003)	1,943.0 TONS	ASPHALTIC CONCRETE MIXTURE	\$ 100	00	\$ 194,300	00
4.04 BPB (004)	339.0 C.Y.	CONCRETE BASE FOR PAVERS, THICKNESS AS SPECIFIED, CLASS B-32	\$ 400	00	\$ 135,600	00

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			DOLLARS	CTS	DOLLARS	CTS
4.04 H (005)	850.0 C.Y.	CONCRETE BASE FOR PAVEMENT, VARIABLE THICKNESS FOR TRENCH RESTORATION, (HIGH-EARLY STRENGTH)	\$ 125	00	\$ 106,250	00
4.04 HD (006)	230.0 C.Y.	CONCRETE BASE FOR PAVEMENT, 9" THICK (HIGH-EARLY STRENGTH)	\$ 300	00	\$ 69,000	00
4.06 (007)	68.0 C.Y.	CONCRETE IN STRUCTURES, CLASS A-40	\$ 2,000	00	\$ 136,000	00
4.07 BA (008)	30.0 L.F.	RESET GRANITE CURB	\$ 1	00	\$ 30	00

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			DOLLARS	CTS	DOLLARS	CTS
4.07 CB (009)	190.0 L.F.	NEW GRANITE CURB, STRAIGHT	\$ 100	00	\$ 19,000	00
4.07 CC (010)	100.0 L.F.	NEW GRANITE CURB, CORNER	\$ 150	00	\$ 15,000	00
4.07 DB (011)	160.0 L.F.	NEW GRANITE CURB, STRAIGHT (1'-0" WIDE)	\$ 150	00	\$ 24,000	00
4.07 DC (012)	90.0 L.F.	NEW GRANITE CURB, CORNER (1'-0" WIDE)	\$ 200	00	\$ 18,000	00

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			DOLLARS	CTS	DOLLARS	CTS
4.07 DD (013)	70.0 L.F.	NEW STRAIGHT GRANITE CURB, DEPRESSED AND TRANSITION (1'-0" WIDE)	\$ 150	00	\$ 10,500	00
4.07 DE (014)	80.0 L.F.	NEW GRANITE CURB. STRAIGHT (6" WIDE)	\$ 150	00	\$ 12,000	00
4.09 AD (015)	10.0 L.F.	STRAIGHT STEEL FACED CONCRETE CURB (18" DEEP)	\$ 65	00	\$ 650	00
4.13 AAS (016)	595.0 S.F.	4" CONCRETE SIDEWALK (UNPIGMENTED)	\$ 10	00	\$ 5,950	00

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			DOLLARS	CTS	DOLLARS	CTS
4.13 DE (017)	40.0 S.F.	EMBEDDED PREFORMED DETECTABLE WARNING UNITS	\$ 1	00	\$ 40	00
4.13 DS (018)	48.0 S.F.	DETECTABLE WARNING SURFACE - SPECIAL PRECAST	\$ 20	00	\$ 960	00
4.14 (019)	7,900.0 LBS.	STEEL REINFORCEMENT BARS	\$ 0	65	\$ 5,135	00
4.14 W (020)	4,200.0 LBS.	WELDED STEEL WIRE FABRIC	\$ 1	00	\$ 4,200	00

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			DOLLARS	CTS	DOLLARS	CTS
4.15 LSM (021)	5.0 C.Y.	LIGHTWEIGHT SOIL MEDIUM	\$ 100	00	\$ 500	00
4.15 SSM (022)	38.0 C.Y.	STRUCTURAL TOPSOIL	\$ 75	00	\$ 2850	00
4.15 UPMB (023)	37.0 C.Y.	URBAN PLANTING MIX	\$ 75	00	\$ 2775	00
4.16 AA (024)	6.0 EACH	TREES REMOVED (4" TO UNDER 12" CALIPER)	\$ 1	00	\$ 6	00

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			DOLLARS	CTS	DOLLARS	CTS
4.16 CGTI (025)	10.0 EACH	TREES PLANTED, 3" to 3-1/2" Caliper, Gleditsia Triacanthos Inermis Shademaster	\$ 950	00	\$ 9,500	00
4.17 OG2G (026)	140.0 EACH	ORNAMENTAL GRASS PLANTED, 2 GALLON	\$ 35	00	\$ 4,900	00
4.17 OG3G (027)	60.0 EACH	ORNAMENTAL GRASS PLANTED, 3 GALLON	\$ 45	00	\$ 2,700	00
4.17 OG5G (028)	51.0 EACH	ORNAMENTAL GRASS PLANTED, 5 GALLON	\$ 95	00	\$ 4,845	00

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			DOLLARS	CTS	DOLLARS	CTS
4.17 PG2G (029)	220.0 EACH	PERENNIALS OR GROUNDCOVERS, PLANTED, 2 GALLON, ALL TYPES	\$ 35	00	\$ 7,700	00
4.18 DM (030)	200.0 S.F.	GEOTEXTILE/COMPOSITE DRAINAGE MAT	\$ 25	00	\$ 5,000	00
4.18 RB (031)	60.0 S.Y.	ROOT BARRIER FABRIC	\$ 1	00	\$ 60	00
4.21 (032)	18.0 P/HR	TREE CONSULTANT	\$ 70	00	\$ 1,260	00

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			DOLLARS	CTS	DOLLARS	CTS
50.41M6C12 (033)	220.0 L.F.	12" D.I.P. CLASS 56 STORM SEWER, ON CONCRETE CRADLE	\$ 700	00	\$ 154,000	00
50.41M6C16 (034)	130.0 L.F.	16" D.I.P. CLASS 56 STORM SEWER, ON CONCRETE CRADLE	\$ 800	00	\$ 104,000	00
51.21C000012D (035)	1.0 EACH	CLEANOUT MANHOLE ON 12" D.I.P. SEWER	\$ 5,000	00	\$ 5,000	00
51.21C000016D (036)	3.0 EACH	CLEANOUT MANHOLE ON 16" D.I.P. SEWER	\$ 5,000	00	\$ 15,000	00

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			DOLLARS	CTS	DOLLARS	CTS
51.21S0A1000V (037)	1.0 EACH	STANDARD MANHOLE TYPE A-1	\$ 5,000	00	\$ 5,000	00
51.22RM (038)	2.0 EACH	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING SEWER	\$ 100	00	\$ 200	00
51.23RF (039)	2.0 EACH	REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	\$ 1	00	\$ 2	00
51.41P000 (040)	1.0 EACH	SPECIAL CATCH BASIN	\$ 3,000	00	\$ 3,000	00

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			DOLLARS	CTS	DOLLARS	CTS
51.41S001 (041)	1.0 EACH	STANDARD CATCH BASIN, TYPE 1	\$ 3,000	00	\$ 3,000	00
51.41S002 (042)	1.0 EACH	STANDARD CATCH BASIN, TYPE 2	\$ 3,000	00	\$ 3,000	00
51.41W000 (043)	2.0 EACH	SHALLOW CATCH BASIN	\$ 3,000	00	\$ 6,000	00
52.11D06 (044)	70.0 L.F.	6" DUCTILE IRON PIPE BASIN CONNECTION	\$ 200	00	\$ 14,000	00

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			DOLLARS	CTS	DOLLARS	CTS
54.12CS (045)	20.0 C.Y.	CLEANING OF DRAINAGE STRUCTURES	\$ 1	00	\$ 20	00
55.11AB (046)	2.0 EACH	ABANDONING BASINS AND INLETS	\$ 1	00	\$ 2	00
6.02 AAN (047)	4,060.0 C.Y.	UNCLASSIFIED EXCAVATION	\$ 70	00	\$ 284,200	00
6.02 XHEC (048)	920.0 C.Y.	INCREMENTAL COST FOR MODIFYING WORK METHODS NEAR (WITHIN 3 FEET OF) TRANSIT FACILITIES AND BUILDING VAULTS	\$ 1	00	\$ 920	00

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			DOLLARS	CTS	DOLLARS	CTS
6.02 XSCW (049)	2,075.0 C.Y.	INCREMENTAL COST FOR USING SPECIAL CARE WORK METHODS NEAR (FROM 3 FEET TO 50 FEET) TRANSIT FACILITIES	\$ 0	10	\$ 207	50
6.04 DG (050)	5.0 S.Y.	DECORATIVE GRAVEL	\$ 100	00	\$ 500	00
6.06 GS (051)	35.0 S.Y.	RESET GRANITE SLAB SIDEWALK (ON MORTAR SETTING BED)	\$ 35	00	\$ 1225	00
6.25 RS (052)	1,300.0 S.F.	TEMPORARY SIGNS	\$ 1	00	\$ 1300	00

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			DOLLARS	CTS	DOLLARS	CTS
6.26 (053)	3,390.0 L.F.	TIMBER CURB	\$ 0	00	\$ 339	00
6.28 AA (054)	2,150.0 L.F.	LIGHTED TIMBER BARRICADES	\$ 4	00	\$ 8,600	00
6.28 ME (055)	3,300.0 L.F.	LIGHTED TIMBER FENCING FOR USE IN LOWER MANHATTAN PROJECTS	\$ 2	00	\$ 6,600	00
6.34 ACTP (056)	3,300.0 L.F.	TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	\$ 2	00	\$ 6,600	00

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			DOLLARS	CTS	DOLLARS	CTS
6.40 D (057)	30.0 MONTH	ENGINEER'S FIELD OFFICE (TYPE D)	\$ 10,000	00	\$ 300,000	00
6.44 (058)	16,900.0 L.F.	THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	\$ 0	85	\$ 14,365	00
6.47 PCB (059)	2,113.0 S.F.	FURNISH AND INSTALL CONCRETE PAVERS	\$ 25	00	\$ 52,825	00
6.52 (060)	3,000.0 P/HR	UNIFORMED FULL-TIME FLAGPERSON	\$ 75	00	\$ 225,000	00

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			DOLLARS	CTS	DOLLARS	CTS
6.59 PF (061)	210.0 L.F.	TEMPORARY CONCRETE BARRIER WITH FENCE	\$ 5	00	\$ 4050	00
6.60 B (062)	1,270.0 S.Y.	FURNISH AND INSTALL ASPHALT BLOCK PAVERS	\$ 230	00	\$ 292,100	00
6.67 (063)	260.0 C.Y.	SUBBASE COURSE, SELECT GRANULAR MATERIAL	\$ 32	00	\$ 8320	00
6.68 (064)	376.0 S.Y.	PLASTIC FILTER FABRIC	\$ 2	00	\$ 752	00

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			DOLLARS	CTS	DOLLARS	CTS
6.74 BE (065)	92.0 L.F.	BRONZE RAISED EDGING	\$ 75	00	\$ 6,900	00
6.74 BV (066)	111.0 S.F.	BRONZE VENEER	\$ 17	00	\$ 1,887	00
6.74 PRA (067)	124.0 L.F.	PAVER RESTRAINT ANCHORAGE	\$ 25	00	\$ 3,100	00
6.74 PRE (068)	124.0 L.F.	PAVER RESTRAINT EDGE	\$ 25	00	\$ 3,100	00

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			DOLLARS	CTS	DOLLARS	CTS
6.82 A (069)	10.0 S.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	\$ 1	00	\$ 10	00
6.82 B (070)	30.0 L.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	\$ 1	00	\$ 30	00
6.83 AA (071)	40.0 S.F.	FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	\$ 1	00	\$ 40	00
6.83 AB (072)	100.0 L.F.	FURNISHING NEW TRAFFIC SIGN POSTS	\$ 1	00	\$ 100	00

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			DOLLARS	CTS	DOLLARS	CTS
6.83 BA (073)	40.0 S.F.	INSTALLING TRAFFIC SIGNS	\$ 1	00	\$ 40	00
6.83 BB (074)	100.0 L.F.	INSTALLING TRAFFIC SIGN POSTS	\$ 1	00	\$ 100	00
6.85 A (075)	1.0 F.S.	TRAFFIC ENFORCEMENT AGENTS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 158,555.30	\$ 158,555.30		\$ 158,555.30	
6.87 (076)	11,120.0 EACH	PLASTIC BARRELS	\$ 0	10	\$ 1,112	00

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			DOLLARS	CTS	DOLLARS	CTS
6.97 A (077)	990.0 C.Y.	EXTRA-HIGH-EARLY STRENGTH CONCRETE	\$ 165	00	\$ 163,350	00
60.11R520 (078)	700.0 L.F.	FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 135	00	\$ 94,500	00
60.11R530 (079)	15.0 L.F.	FURNISHING AND DELIVERING 30-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 350	00	\$ 5,250	00
60.11R548 (080)	95.0 L.F.	FURNISHING AND DELIVERING 48-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ 425	00	\$ 40,375	00

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			DOLLARS	CTS	DOLLARS	CTS
60.11R606 (081)	270.0 L.F.	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 40	00	\$ 10,800	00
60.11R612 (082)	2,040.0 L.F.	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$ 70	00	\$ 142,800	00
60.12D06 (083)	455.0 L.F.	LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 100	00	\$ 45,500	00
60.12D12 (084)	2,330.0 L.F.	LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 140	00	\$ 326,200	00

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			DOLLARS	CTS	DOLLARS	CTS
60.12D20 (085)	845.0 L.F.	LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 200	00	\$ 169,000	00
60.12D30 (086)	25.0 L.F.	LAYING 30-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 1500	00	\$ 37,500	00
60.12D48 (087)	105.0 L.F.	LAYING 48-INCH DUCTILE IRON PIPE AND FITTINGS	\$ 1000	00	\$ 105,000	00
60.13M0A24 (088)	22.0 TONS	FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24-INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	\$ 8000	00	\$ 176,000	00

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			DOLLARS	CTS	DOLLARS	CTS
60.13M5R30 (089)	1.0 EACH	FURNISHING AND DELIVERING 30-INCH DUCTILE IRON MECHANICAL JOINT REDUCERS (CLASS 55)	\$ 6,000	00	\$ 6,000	00
60.13M5R48 (090)	1.0 EACH	FURNISHING AND DELIVERING 48-INCH DUCTILE IRON MECHANICAL JOINT REDUCERS (CLASS 55)	\$ 18,000	00	\$ 18,000	00
60.13M5S30 (091)	1.0 EACH	FURNISHING AND DELIVERING 30-INCH DUCTILE IRON MECHANICAL JOINT SLEEVES (CLASS 55)	\$ 6,500	00	\$ 6,500	00
60.13M5S48 (092)	1.0 EACH	FURNISHING AND DELIVERING 48-INCH DUCTILE IRON MECHANICAL JOINT SLEEVES (CLASS 55)	\$ 14,000	00	\$ 14,000	00

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			DOLLARS	CTS	DOLLARS	CTS
60.18BJC20EL (093)	9.0 EACH	FURNISHING, DELIVERING AND INSTALLING BELL JOINT CLAMPS, COMPLETE FOR 20-INCH PIPE AND LESS	\$ 1100	00	\$ 9,900	00
60.21SP3T30 (094)	120.0 L.F.	FURNISHING, DELIVERING AND LAYING 30-INCH STRAIGHT STEEL PIPE, 3/8-INCH WALL THICKNESS	\$ 1,700	00	\$ 204,000	00
60.21SP3T36 (095)	60.0 L.F.	FURNISHING, DELIVERING AND LAYING 36-INCH STRAIGHT STEEL PIPE, 3/8-INCH WALL THICKNESS	\$ 2,300	00	\$ 138,000	00
60.21SP4T48 (096)	1,230.0 L.F.	FURNISHING, DELIVERING AND LAYING 48-INCH STRAIGHT STEEL PIPE, 1/2-INCH WALL THICKNESS	\$ 2,000	00	\$ 2,460,000	00

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			DOLLARS	CTS	DOLLARS	CTS
60.22BR3T30 (097)	10.0 L.F.	FURNISHING, DELIVERING AND LAYING 30-INCH STEEL BENDS AND REDUCERS, 3/8-INCH WALL THICKNESS	\$ 3,300	00	\$ 33,000	00
60.22BR4T48 (098)	75.0 L.F.	FURNISHING, DELIVERING AND LAYING 48-INCH STEEL BENDS AND REDUCERS, 1/2-INCH WALL THICKNESS	\$ 2,300	00	\$ 172,500	00
60.25PSO (099)	10,000.0 LBS.	FURNISHING, DELIVERING AND INSTALLING PLATE STEEL OUTLETS ON STEEL PIPE, ACCESS MANHOLE OUTLETS WITH COVERS, AND NUTS AND BOLTS COMPLETE	\$ 13	00	\$ 130,000	00
60.27RSC36 (100)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH DIAMETER BOLTED, SPLIT SLEEVE-TYPE RESTRAINED COUPLING	\$ 14,000	00	\$ 14,000	00

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			DOLLARS	CTS	DOLLARS	CTS
60.27RSC48 (101)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 48-INCH DIAMETER BOLTED, SPLIT SLEEVE-TYPE RESTRAINED COUPLING	\$ 30,000	00	\$ 30,000	00
60.29CP (102)	1.0 L.S.	FURNISHING, INSTALLING AND TESTING CORROSION CONTROL AND/OR CATHODIC PROTECTION SYSTEM	\$ 100	00	\$ 100	00
61.11DFM06 (103)	4.0 EACH	FURNISHING AND DELIVERING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 4,000	00	\$ 4,000	00
61.11DFM20 (104)	3.0 EACH	FURNISHING AND DELIVERING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 18,000	00	\$ 54,000	00

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			DOLLARS	CTS	DOLLARS	CTS
61.11DMM06 (105)	11.0 EACH	FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,100	00	\$ 12,100	00
61.11DMM12 (106)	11.0 EACH	FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 2,800	00	\$ 30,800	00
61.11DMM20 (107)	3.0 EACH	FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 18,000	00	\$ 54,000	00
61.11TWC03 (108)	4.0 EACH	FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 300	00	\$ 1,200	00

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			DOLLARS	CTS	DOLLARS	CTS
61.11TWC04 (109)	4.0 EACH	FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 400	00	\$ 1600	00
61.11TWC06 (110)	3.0 EACH	FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 900	00	\$ 2700	00
61.11TWC08 (111)	4.0 EACH	FURNISHING AND DELIVERING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1,200	00	\$ 4,800	00
61.11TWC12 (112)	1.0 EACH	FURNISHING AND DELIVERING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 2,000	00	\$ 2,000	00

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			DOLLARS	CTS	DOLLARS	CTS
61.12DFM06 (113)	4.0 EACH	SETTING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 1	00	\$ 4	00
61.12DFM20 (114)	3.0 EACH	SETTING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$ 1	00	\$ 3	00
61.12DMM06 (115)	13.0 EACH	SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 13	00
61.12DMM12 (116)	13.0 EACH	SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 13	00

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			DOLLARS	CTS	DOLLARS	CTS
61.12DMM20 (117)	4.0 EACH	SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 4	00
61.12TWC03 (118)	4.0 EACH	SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 4	00
61.12TWC04 (119)	4.0 EACH	SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 4	00
61.12TWC06 (120)	3.0 EACH	SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 3	00

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			DOLLARS	CTS	DOLLARS	CTS
61.12TWC08 (121)	4.0 EACH	SETTING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 4	00
61.12TWC12 (122)	1.0 EACH	SETTING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 1	00	\$ 1	00
61.21BVB36 (123)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH BUTTERFLY VALVE WITH BY-PASS ARRANGEMENT AND OUTLET, COMPLETE	\$ 140,000	00	\$ 140,000	00
61.21BVB48 (124)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 48-INCH BUTTERFLY VALVE WITH BY-PASS ARRANGEMENT AND OUTLET, COMPLETE	\$ 150,000	00	\$ 150,000	00

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			DOLLARS	CTS	DOLLARS	CTS
62.11SD (125)	13.0 EACH	FURNISHING AND DELIVERING HYDRANTS	\$ 2800	00	\$ 36,400	00
62.12SG (126)	13.0 EACH	SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ 800	00	\$ 10,400	00
62.13RH (127)	10.0 EACH	REMOVING HYDRANTS	\$ 1	00	\$ 10	00
62.14FS (128)	39.0 EACH	FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	\$ 150	00	\$ 5,850	00

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			DOLLARS	CTS	DOLLARS	CTS
63.11MH (129)	4.0 TONS	FURNISHING, DELIVERING AND INSTALLING 36-INCH CAST IRON MANHOLE HEADS AND COVERS	\$ 500	00	\$ 2,000	00
63.11MS (130)	120.0 EACH	FURNISHING, DELIVERING AND INSTALLING MANHOLE STEPS TYPE PS2-PF	\$ 65	00	\$ 7,800	00
63.11VC (131)	24.0 TONS	FURNISHING AND DELIVERING VARIOUS CASTINGS	\$ 10	00	\$ 240	00
64.11EL (132)	18.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2-INCH OR LARGER SCREW TAPS	\$ 200	00	\$ 3,600	00

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			DOLLARS	CTS	DOLLARS	CTS
64.11ST (133)	25.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	\$ 300	00	\$ 2,500	00
64.12COEG (134)	60.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 75	00	\$ 4,500	00
64.12COLT (135)	80.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 75	00	\$ 6,000	00
64.12ESEG (136)	180.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$ 85	00	\$ 15,300	00

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			DOLLARS	CTS	DOLLARS	CTS
64.12ESLT (137)	40.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$ 85	00	\$ 3,400	00
64.13WC12 (138)	14.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 1,800	00	\$ 25,200	00
64.13WC20 (139)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$ 3,000	00	\$ 6,000	00
65.11BR (140)	3,800.0 LBS.	FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	\$ 5	00	\$ 19,000	00

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			DOLLARS	CTS	DOLLARS	CTS
65.21PS (141)	2,715.0 L.F.	FURNISHING AND PLACING POLYETHYLENE SLEEVE Unit price bid shall not be less than: \$ 0.50	\$ 0	50	\$ 1,357	50
65.31FF (142)	49,900.0 S.F.	FURNISHING, DELIVERING AND PLACING FILTER FABRIC Unit price bid shall not be less than: \$ 0.10	\$ 0	10	\$ 4,990	00
65.41PS06 (143)	4.0 EACH	FURNISHING, DELIVERING AND INSTALLING 6-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 1,000	00	\$ 4,000	00
65.41PS20 (144)	6.0 EACH	FURNISHING, DELIVERING AND INSTALLING 20-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 1,700	00	\$ 10,200	00

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			DOLLARS	CTS	DOLLARS	CTS
65.41PS30 (145)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING 30-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 3,000	00	\$ 6,000	00
65.41PS36 (146)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 3,500	00	\$ 7,000	00
65.41PS48 (147)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING 48-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$ 5,000	00	\$ 10,000	00
65.51PC (148)	300.0 C.Y.	FURNISHING AND PLACING CAST-IN-PLACE CONCRETE CLASS 40 AND PRECAST CONCRETE CLASS 50	600 800	00 00	180,000 240,000	00 00

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			DOLLARS	CTS	DOLLARS	CTS
65.61SS (149)	38,000.0 LBS.	FURNISHING, DELIVERING AND PLACING STRUCTURAL, REINFORCING AND MISCELLANEOUS STEEL	\$ 1	00	\$ 38,000	00
65.71SG (150)	1,300.0 C.Y.	FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	\$ 1	00	\$ 1,300	00
67.11AA36 (151)	450.0 L.F.	INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING 36-INCH DIAMETER STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE	\$ 3	00	\$ 1,350	00
7.01 P (152)	52.0 S.F.	FURNISH AND INSTALL NEW CUSTOM SUBWAY FRAMES AND GRATES	\$ 30	00	\$ 1560	00

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			DOLLARS	CTS	DOLLARS	CTS
7.12 A (153)	6.0 EACH	PROCTOR ANALYSIS	\$ 175	00	\$ 1050	00
7.12 B (154)	6.0 EACH	IN-PLACE SOIL DENSITY TEST	\$ 400	00	\$ 2,400	00
7.13 B (155)	24.0 MONTH	MAINTENANCE OF SITE Unit price bid shall not be less than: \$ 12,000.00	\$ 12,000	00	288,000 12 00	00
7.17 (156)	32.0 C.Y.	OPEN-GRADED STONE BASE	\$ 65	00	\$ 2080	00

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			DOLLARS	CTS	DOLLARS	CTS
7.36 (157)	8,000.0 L.F.	PEDESTRIAN STEEL BARRICADES	\$ 0	10	\$ 800	00
7.48 U2 (158)	20.0 L.F.	2" DIAMETER UNPERFORATED PVC PIPE	\$ 100	00	\$ 2,000	00
7.50 RB (159)	52.0 L.F.	RIVER BENCH	\$ 800	00	\$ 41,600	00
7.53 KBC (160)	39.0 EACH	CHAIR	\$ 1,500	00	\$ 58,500	00

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			DOLLARS	CTS	DOLLARS	CTS
7.53 KBT (161)	13.0 EACH	TABLE	\$ 1,700	00	\$ 22,100	00
7.54 ADD (162)	1.0 EACH	CAST IRON DOME FRAME AND GRATE	\$ 700	00	\$ 700	00
7.54 AFD (163)	2.0 EACH	CAST IRON FLOOR DRAIN FRAME AND GRATE	\$ 750	00	\$ 1,500	00
7.54 BTD12 (164)	130.0 L.F.	BRONZE TRENCH DRAIN GRATE AND FRAME, 12 INCH WIDTH	\$ 300	00	\$ 39,000	00

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			DOLLARS	CTS	DOLLARS	CTS
7.54 BTD8 (165)	40.0 L.F.	BRONZE TRENCH DRAIN GRATE AND FRAME, 8 INCH WIDTH	\$ 300	00	\$ 12,000	00
7.54 BTDV (166)	34.0 S.F.	BRONZE TRENCH DRAIN GRATE AND FRAME, VARIABLE WIDTH	\$ 65	00	\$ 2,210	00
7.54 BTG (167)	3.0 EACH	BRONZE TREE GRATE AND FRAME	\$ 2,400	00	\$ 7,200	00
7.55 BPR (168)	20.0 L.F.	BRONZE PLANTER RAILING	\$ 100	00	\$ 2,000	00

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			DOLLARS	CTS	DOLLARS	CTS
7.55 BSR (169)	18.0 L.F.	BRONZE STAIR RAILING	\$ 75	00	\$ 1,350	00
7.55 BTR (170)	105.0 L.F.	BRONZE TERRACE RAILING	\$ 60	00	\$ 6,300	00
7.88 AA (171)	1.0 L.S.	RODENT INFESTATION SURVEY AND MONITORING Unit price bid shall not be less than: \$ 5,300.00	\$ 5,300	00	\$ 5,300	00
7.88 AB (172)	480.0 EACH	RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 60.00	\$ 60	00	\$ 28,800	00

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			DOLLARS	CTS	DOLLARS	CTS
7.88 AC (173)	480.0 EACH	BAITING OF RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 9.25	\$ 9	25	4,440	00
7.88 AD (174)	17.0 BLOCK	WATERBUG BAIT APPLICATIONS Unit price bid shall not be less than: \$ 65.00	\$ 65	00	\$ 1,105	00
70.21DK (175)	1,470.0 S.Y.	DECKING	\$ 15	00	\$ 22,050	00
70.31FN (176)	9,900.0 L.F.	FENCING Unit price bid shall not be less than: \$ 2.00	\$ 2	00	\$ 19,800	00

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			DOLLARS	CTS	DOLLARS	CTS
70.51EO (177)	10.0 C.Y.	EXCAVATION OF BOULDERS IN OPEN CUT Unit price bid shall not be less than: \$ 75.00	\$ 75	00	\$ 750	00
70.61RE (178)	10.0 C.Y.	ROCK EXCAVATION	\$ 800	00	\$ 8,000	00
70.81CB (179)	2,060.0 C.Y.	CLEAN BACKFILL Unit price bid shall not be less than: \$ 15.00	\$ 15	00	\$ 30,900	00
70.91SW12 (180)	1,400.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	\$ 0	10	\$ 140	00

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			DOLLARS	CTS	DOLLARS	CTS
70.91SW20 (181)	8,060.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	\$ 0	10	\$ 806 C.C.	00
73.11AB (182)	10.0 C.Y.	ADDITIONAL BRICK MASONRY Unit price bid shall not be less than: \$ 62.50	\$ 62	50	\$ 625	00
73.21AC (183)	30.0 C.Y.	ADDITIONAL CONCRETE Unit price bid shall not be less than: \$ 62.50	\$ 62	50	\$ 1875	00
73.31AE0 (184)	150.0 C.Y.	ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) Unit price bid shall not be less than: \$ 20.00	\$ 20	00	\$ 3000	00

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			DOLLARS	CTS	DOLLARS	CTS
73.41AG (185)	190.0 C.Y.	ADDITIONAL SELECT GRANULAR BACKFILL Unit price bid shall not be less than: \$ 15.00	\$ 15	00	\$ 2850	00
79.11AATA (186)	1.0 F.S.	ALLOWANCE FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING TRANSIT AUTHORITY DUCT INSULATION (REMOVAL OF ACM, REPLACEMENT WITH NON-ACM, AND SUPPORT AND PROTECTION OF EXISTING TRANSIT AUTHORITY DUCT, COMPLETE) PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 100,000.00	\$ 100,000	00	\$ 100,000	00
8.01 C1 (187)	3,800.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	\$ 1	00	\$ 3800	00
8.01 C2 (188)	4.0 SETS	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	\$ 1	00	\$ 4	00

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			DOLLARS	CTS	DOLLARS	CTS
8.01 H (189)	10.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	\$ 150	00	\$ 1,500	00
8.01 S (190)	1.0 L.S.	HEALTH AND SAFETY	\$ 300	00	\$ 300	00
8.01 W1 (191)	7.0 DAY	REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	\$ 1	00	\$ 7	00
8.01 W2 (192)	1.0 SETS	SAMPLING AND TESTING OF WATER	\$ 1	00	\$ 1	00

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			DOLLARS	CTS	DOLLARS	CTS
8.02 A (193)	10,540.0 S.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	\$ 0	10	\$ 1054	00
8.02 B (194)	470.0 L.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	\$ 1	00	\$ 470	00
8.08 (195)	2.0 EACH	VARIABLE MESSAGE BOARD	\$ 5,000	00	\$ 10,000	00
8.15 RDF (196)	1.0 EACH	RIVER DRINKING FOUNTAIN	\$ 5,000	00	\$ 5,000	00

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			DOLLARS	CTS	DOLLARS	CTS
8.22 D (197)	6,400.0 S.F.	THREE PLY MEMBRANE WATERPROOFING	\$ 6	00	\$ 38,400	00
9.00 C (198)	600.0 C.F.	EXPLORATORY TEST PITS	\$ 1	00	\$ 600	00
9.06 HW (199)	1.0 F.S.	ALLOWANCE FOR DECORATIVE MESH FABRIC PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 150,000.00	\$ 150,000	00	\$ 150,000	00
9.95 GCB (200)	168.0 C.F.	GRANITE CURB WALL	\$ 200	00	\$ 33,600	00

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			DOLLARS	CTS	DOLLARS	CTS
9.95 GPB (201)	231.0 S.F.	GRANITE PAVING BANDS	\$ 50	00	\$ 11,550	00
9.95 GST (202)	169.0 L.F.	GRANITE STAIR TREADS	\$ 175	00	\$ 29,575	00
BMP-GI-4.15ES (203)	22.0 C.Y.	ENGINEERED SOIL	\$ 100	00	\$ 2,200	00
E 260519 G (204)	400.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	\$ 2	00	\$ 800	00

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			DOLLARS	CTS	DOLLARS	CTS
E 260526 (205)	110.0 L.F.	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	\$ 10	00	\$ 1,100	00
E 260533 AB (206)	110.0 L.F.	METAL CONDUIT AND TUBING (1-1/4" GALVANIZED RIGID STEEL CONDUIT)	\$ 15	00	\$ 1,650	00
E 262726 A (207)	2.0 EACH	GFCI RECEPTACLE (DUPLX)	\$ 300	00	\$ 600	00
E 262726 D (208)	2.0 EACH	SPRING WOUND MECHANICAL TIMER SWITCH	\$ 300	00	\$ 600	00

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			DOLLARS	CTS	DOLLARS	CTS
HW-900H (209)	1.0 F.S.	ALLOWANCE FOR CITY WORK ACCELERATION PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 500,000.00	\$ 500,000.00		\$ 500,000.00	
NYCT-7A.1 (210)	270.0 S.F.	MEMBRANE WATERPROOFING	\$ 15	00	\$ 4,050	00
NYCT-7A.2 (211)	270.0 S.F.	WATERPROOFING PROTECTION BOARD	\$ 8	00	\$ 2,160	00
PER-BP (212)	3.0 EACH	REMOVING AND REINSTALLING EXISTING BRONZE PLAQUES	\$ 100	00	\$ 300	00

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			DOLLARS	CTS	DOLLARS	CTS
PER-DW (213)	95.0 S.F.	PLANTER DRAINAGE/WATER RETENTION SYSTEM	\$ 50	00	\$ 4,750	00
PK-13D (214)	50.0 L.F.	TYPE K COPPER TUBING, 1" DIAMETER	\$ 65	00	\$ 3,250	00
PK-17 (215)	2.0 EACH	CAST IRON VALVE BOX, 5-1/4" DIAMETER	\$ 800	00	\$ 1,600	00
PK-184-GH1 (216)	1.0 EACH	GROUND HYDRANT - 1" DIAMETER	\$ 800	00	\$ 800	00

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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
SL-100.01.02 (217)	1.0 EACH	FURNISH AND INSTALL FOUNDATION WITH 2 CONDUIT BENDS FOR STREET LAMPOST AS PER DRAWINGS E-3788 AND J-5227	\$ 500	00	\$ 500	00
SL-20.06.03 (218)	1.0 EACH	RELOCATE POST ON NEW FOUNDATION, WITH ALL APPURTENANT EQUIPMENT WITHIN 500ft FOUNDATION AS PER DRAWINGS E-3788 OR H-5253. REMOVE PORTION OF OLD FOUNDATION TO 10" BELOW GRADE.	\$ 4000	00	\$ 4000	00
SL-33.01.02 (219)	100.0 L.F.	FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	\$ 5	00	\$ 500	00
SL-35.12.02 (220)	47.0 L.F.	FURNISH ALL LABOR, MATERIAL AND EQUIPMENT TO DRIVE A 2" CONDUIT UNDER ROADWAY OR DESIGNATED AREA. CONDUIT INCLUDED IN ITEM.	\$ 1	00	\$ 47	00

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			DOLLARS	CTS	DOLLARS	CTS
SL-39.01.01 (221)	1.0 EACH	FURNISH ALL LABOR, MATERIAL AND EQUIPMENT TO DISCONNECT ENERGY SUPPLY TO A LAMP, ON A LAMPPOST.	\$ 200	00	\$ 200	00
SL-39.01.02 (222)	1.0 EACH	FURNISH ALL LABOR, MATERIAL AND EQUIPMENT TO CONNECT ENERGY SUPPLY TO A LAMP, ON A LAMPPOST.	\$ 200	00	\$ 200	00
T-1.1 (223)	3.0 EACH	INSTALL TYPE "S" OR "T" FOUNDATION	\$ 300	00	\$ 900	00
T-1.18 (224)	2.0 EACH	REMOVE TYPE "A", "B", "S" OR "T" SERIES FOUNDATION	\$ 1	00	\$ 2	00

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			DOLLARS	CTS	DOLLARS	CTS
T-2.1 (225)	3.0 EACH	INSTALL TYPE "S-1" OR "T-1" SERIES POST	\$ 125	00	\$ 375	00
T-2.16 (226)	2.0 EACH	FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH SIGNALS	\$ 440	00	\$ 880	00
T-2.22 (227)	2.0 EACH	REMOVE TYPE "S-1" OR "T-1" SERIES POST	\$ 165	00	\$ 330	00
T-2.28 (228)	1.0 EACH	REMOVE MAST ARM FROM ANY POST	\$ 100	00	\$ 100	00

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			DOLLARS	CTS	DOLLARS	CTS
T-20000 (229)	2.0 EACH	FURNISH TEN FOOT ALUMINUM SIGNAL POST TYPE "S-1"	\$ 250	00	\$ 500	00
T-20020 (230)	9.0 EACH	a) FURNISH 3/4" ANCHOR BOLT ASSEMBLIES FOR S-1 (EACH) (3 REQUIRED PER POST)	\$ 15	00	\$ 135	00
T-3.1 (231)	1.0 EACH	INSTALL "ONE-WAY" SIGNAL UNIT ON MAST ARM OR TOP OF TRAFFIC POST	\$ 100	00	\$ 100	00
T-3.15 (232)	2.0 EACH	HOOD ONE SIGNAL HEAD	\$ 120	00	\$ 240	00

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			DOLLARS	CTS	DOLLARS	CTS
T-3.18 (233)	6.0 EACH	REMOVE SIGNAL HEAD FROM ANY TYPE POST	\$ 120	00	\$ 790	00
T-3.21 (234)	7.0 EACH	REMOVE PEDESTRIAN SIGNAL OR SIGN UNIT OR OTHER ILLUMINATED SIGNS FROM ANY POST	\$ 120	00	\$ 840	00
T-3.6 (235)	4.0 EACH	INSTALL PEDESTRIAN SIGNAL ON ANY TYPE POST	\$ 200	00	\$ 800	00
T-3.7 (236)	4.0 EACH	INSTALL "ONE-WAY" SIGNAL UNIT OR PEDESTRIAN SIGNAL ON ANY OTHER STRUCTURE	\$ 325	00	\$ 1300	00

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			DOLLARS	CTS	DOLLARS	CTS
T-30013L (237)	5.0 EACH	FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 8" - W/LED LENS	\$ 150	00	\$ 750	00
T-31150 (238)	1.0 EACH	FURNISH "1SA" ALUMINUM DIE CASTINGS AND ASSEMBLY FOR POST SIGNAL MOUNTING	\$ 25	00	\$ 25	00
T-31210 (239)	8.0 EACH	h) "HUB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ 10	00	\$ 80	00
T-31340 (240)	4.0 EACH	f) "VB-P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ 35	00	\$ 140	00

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			DOLLARS	CTS	DOLLARS	CTS
T-33000L (241)	1.0 EACH	FURNISH POLYCARBONATE INCANDESCENT PED SIGNAL W/LED LENS	\$ 145	00	\$ 140	00
T-33001-L (242)	4.0 EACH	FURNISH POLYCARBONATE PEDESTRIAN SIGNAL (16 X 16) W/LED COUNT LENS (SPECIFICATION A-L)	\$ 170	00	\$ 680	00
T-5.1 (243)	170.0 L.F.	FURNISH AND INSTALL 2" RIGID UNDERGROUND CONDUIT IN UNPAVED ROADWAY	\$ 40	00	\$ 6,800	00
T-5.2 (244)	180.0 L.F.	FURNISH AND INSTALL 2" RIGID UNDERGROUND CONDUIT IN PAVED ROADWAY	\$ 150	00	\$ 27,000	00

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			DOLLARS	CTS	DOLLARS	CTS
T-5.32 (245)	180.0 L.F.	RESTORING PERMANENT ROADWAY (INCLUDING SAWCUT)	\$ 1	00	\$ 180	00
T-6.1 (246)	100.0 L.F.	INSTALL CABLE (INCLUDES OVERHEAD)	\$ 5	00	\$ 500	00
T-6.10 (247)	1,000.0 L.F.	REMOVE CABLE (INCLUDES OVERHEAD)	\$ 5	00	\$ 5,000	00
T-6.11 (248)	150.0 L.F.	REMOVE OVERHEAD CABLE AND SUPPORTS	\$ 28	00	\$ 4,200	00

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			DOLLARS	CTS	DOLLARS	CTS
T-6.2 (249)	1,000.0 L.F.	INSTALL MULTIPLE CABLE (INCLUDES OVERHEAD)	\$ 10	00	\$ 10,000	00
T-6.7 (250)	200.0 L.F.	INSTALL MULTIPLE CABLE AND SUPPORTS ON STRUCTURE	\$ 20	00	\$ 4,000	00
T-60000B (251)	1,200.0 L.F.	FURNISH 2 c # 10B (BREAKDOWN = 2#10 WITH 3RD WIRE FOR GROUNDING).	\$ 1	00	\$ 1,200	00
T-60040 (252)	700.0 L.F.	c) 7 CONDUCTOR, 14 A.W.G.	\$ 1	00	\$ 700	00

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			DOLLARS	CTS	DOLLARS	CTS
T-60190 (253)	1,400.0 L.F.	e) 13 CONDUCTOR, 14 A.W.G.	\$ 1	50	\$ 2100	00
T-8.10 (254)	1.0 EACH	RELOCATE CONCRETE PYLON WITH POST	\$ 1,000	00	\$ 1,000	00
T-8.8 (255)	1.0 EACH	INSTALL CONCRETE PYLON	\$ 1,000	00	\$ 1,000	00
T-8.9 (256)	1.0 EACH	REMOVE CONCRETE PYLON	\$ 300	00	\$ 300	00

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			DOLLARS	CTS	DOLLARS	CTS
T-81000 (257)	1.0 EACH	FURNISH CONCRETE PYLON	\$ 300	00	\$ 300	00
UTL-6.01.12 (258)	3.0 EACH	GAS MAIN CROSSING WATER MAIN 48" THRU 54" IN DIAMETER (S6.01) Unit price bid shall not be less than: \$ 810.00	\$ 810	00	\$ 2430	00
UTL-6.01.9 (259)	9.0 EACH	GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (S6.01) Unit price bid shall not be less than: \$ 485.00	\$ 485	00	\$ 4365	00
UTL-6.02 (260)	1.0 2.0 EACH (CW)	EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (S6.02) Unit price bid shall not be less than: \$ 715.00	\$ 715	00	\$ 715	00

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			DOLLARS	CTS	DOLLARS	CTS
UTL-6.03 (261)	482 500.0 L.F. (cc)	REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (S6.03) Unit price bid shall not be less than: \$ 15.00	\$ 15	00	\$ 7,230	00
UTL-6.05 (262)	5.0 5.0 EACH (cc)	ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (S6.05) Unit price bid shall not be less than: \$ 65.00	\$ 65	00	\$ 325	00
UTL-6.06 (263)	120 250.0 C.Y. (cc)	SPECIAL CARE EXCAVATION AND BACKFILLING (S6.06) Unit price bid shall not be less than: \$ 180.00	\$ 180	00	\$ 21,600	00
UTL-6.07 (264)	50.0 100.0 C.Y. (cc)	TEST PITS FOR GAS FACILITIES (S6.07) Unit price bid shall not be less than: \$ 100.00	\$ 100	00	\$ 5,000	00

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			DOLLARS	CTS	DOLLARS	CTS
UTL-6.09 (265)	530.0 450.0 C.Y. (C.C.)	TRENCH EXCAVATION AND BACKFILL FOR GAS MAINS AND SERVICES. GAS INSTALLED BY OTHERS. Unit price bid shall not be less than: \$ 190.00	\$ 300. 100 (C.C.)	00 00	\$ 159,000. 00	00
UTL-GCS-2WS (266)	1.0 F.S.	GAS INTERFERENCES AND ACCOMMODATIONS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	\$ 50,000.00		\$ 50,000.00	

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			DOLLARS	CTS	DOLLARS	CTS
			SUB-TOTAL:		\$ 9,972,149	30
6.39 A (267)	1.0 LUMP SUM	MOBILIZATION PRICE BID SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.			\$ 398,885	97
			TOTAL BID PRICE:		\$ 10,371,035	27

PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.

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

(NO TEXT ON THIS PAGE)



THE CITY OF NEW YORK

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SCHEDULE B - Subcontractor Utilization Plan - Part I: Agency's Target

This page to be completed by contracting agency

Contract Overview

Pin # 8502013HW0043C FMS Project ID#: HWPLZ004M
 Project Title RECONSTRUCTION OF PERSHING SQUARE WEST
 Contracting Agency Department of Design and Construction
 Agency Address 30-30 Thomson Ave City Long Island City State NY Zip Code 11101
 Contact Person Jessica Lavidas Title MWBE Liaison & Compliance Analyst
 Telephone # (718) 391- 1065 Email Lavidas.Je@ddc.nyc.gov

Project Description (attach additional pages if necessary)

RECONSTRUCTION OF PERSHING SQUARE WEST
PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET
INCLUDING SEWER, WATER MAIN, STREETSCAPING,
STREET LIGHTING, AND TRAFFIC SIGNAL WORK
Together With All Work Incidental Thereto
BOROUGH OF MANHATTAN
CITY OF NEW YORK

(1) ✓ Target Subcontracting Percentage

Percentage of total contract dollar value that agency estimates will be awarded to subcontractors in amounts under \$1 million for construction and professional services.

_____ 5 _____ %

Subcontractor Participation Goals*

Complete and enter total for each Construction or Professional Services, or both (if applicable)

Group	Construction	Professional Services
Black American	UNSPECIFIED %	0 %
Hispanic American	UNSPECIFIED %	0 %
Asian American	UNSPECIFIED %	NO GOAL %
Caucasian Female	NO GOAL %	0 %
Total Participation Goals	(2) 50 %	(3) 0 %

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

M/WBE PROGRAM

SUBCONTRACTOR UTILIZATION PLAN – SCHEDULE B

Subcontractor Utilization Plan (Schedule B): The Subcontractor Utilization Plan (Schedule B) for this Contract is set forth on the following pages of this Bid Booklet. The Subcontractor 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 a Subcontractor Utilization Plan (Part II) with its bid.

Contract Provisions: Contract provisions regarding the participation of MWBE firms are set forth in Article 77 of the Contract. The bidder is advised to review these contract provisions.

Waiver: The bidder may seek a full or partial pre-award waiver of the Target Subcontracting Percentage in accordance with Article 77 of the Contract (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 Target Subcontracting Percentage is set forth in the Subcontractor Utilization Plan (Part III).

Rejection of the Bid: The bidder must complete the Subcontractor Utilization Plan (Part II) set forth on the following pages. Subcontractor Utilization Plans which do not include the required affirmations will be deemed to be non-responsive, unless a full waiver of the Target Subcontracting Percentage is granted (Subcontractor Utilization Plan, Part III). In the event that the City determines that the bidder has submitted a Subcontractor Utilization Plan where the required affirmations are completed but other aspects of the Plan are not complete, or contain a copy or computation error that is at odds with the affirmation, 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 plan 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) days from the date of mailing or upon delivery, if delivered.

Impact on LBE Requirements: If 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.

SCHEDULE B - Subcontractor Utilization Plan - Part II: Bidder/Proposer Subcontracting Plan

This page and the next (Part II herein) are to be completed by the bidder/proposer. **AFFIRMATIONS:** Bidder/proposer must check the applicable boxes below, affirming compliance with M/WBE requirements.

Bidder/proposer **AFFIRMS** or **DOES NOT AFFIRM** [statement below]

It is a material term of the contract to be awarded that, with respect to the total amount of the contract to be awarded, bidder/proposer will award one or more subcontracts for amounts under one million dollars, sufficient to meet or exceed the Target Subcontracting Percentage (as set forth in Part I) unless it obtains a full or partial waiver thereof, and it will award subcontracts sufficient to meet or exceed the Total Participation Goals (as set forth in Part I) unless such goals are modified by the Agency.

- Bidder/proposer **AFFIRMS** that it intends to meet or exceed the Target Subcontracting Percentage (as set forth in Part I); or
- AFFIRMS** that it has obtained a full/partial pre-award waiver of the Target Subcontracting Percentage (as set forth in Part I) and intends to award the modified Target Subcontracting Percentage, if any; or
 - DOES NOT AFFIRM**

Section I: Prime Contractor Contact Information

Tax ID # 134050635 FMS Vendor ID # _____

Business Name Triumph Construction Contact Person Dominick Cuzzi

Address 1354 Seneca Ave Bronx NY 10474

Telephone # 718-861-6000 Email DCuzzi@Triumph Const Corp. Com

Section II: General Contract Information

1. Define the industry in which work is to be performed.

- **Construction** includes all contracts for the construction, rehabilitation, and/or renovation of physical structures. This category does include CM Build as well as other construction related services such as: demolition, asbestos and lead abatement, and painting services, carpentry services, carpet installation and removal, where related to new construction and not maintenance. This category does not include standard services which may be associated with construction projects but which do not constitute construction, such as trucking, site protection, site security, site surveying, soil testing, extermination, and maintenance/operations.
- **Professional Services** are a class of services that typically require the provider to have some specialized field or advanced degree. Services of this type include: legal, management consulting, information technology, accounting, auditing, actuarial, advertising, health services, pure construction management, environmental analysis, scientific testing, architecture and engineering, and traffic studies, and similar services.

a. Type of work on Prime Contract (Check one):

Construction **Professional Services**

b. Type of work on Subcontract (Check all that apply):

Construction **Professional Services** **Other**

2. What is the expected percentage of the total contract dollar value that you expect to award to all subcontracts? 5 %

3. Will you award subcontract(s) in amounts below \$ 1 million for construction and/or professional services contracts within the first 12 months of the notice to proceed on the contract? **Yes** **No**

Section III: Subcontractor Utilization Summary

IMPORTANT: If you do not anticipate that you will subcontract at the target level the agency has specified, because you will perform more of the work yourself, you must seek a waiver of the Target Subcontracting Percentage by completing p.9).

Step 1:
Calculate the percentage (of your total bid) that will go towards subcontracts under \$ 1M for construction and/or professional services

Subcontracts under \$1M (4) (construction/professional services)	Total Bid/Proposal Value	Calculated Target Subcontracting Percentage
\$ <u>518,551.76</u>	÷ \$ <u>10,371,035.27</u>	X 100 = <u>5</u> %

- **Subcontracts under \$1M (construction/professional services):** Enter the value you expect to award to subcontractors in dollars for amounts under \$1 million for construction and/or professional services. This value defines the amount that participation goals apply to, and will be entered into the first line of Step 2.
- **Total Bid/Proposal Value:** Provide the dollar amount of the bid/proposal.
- **Calculated Target Subcontracting Percentage:** The percentage of the total contract dollar value that will be awarded to one or more subcontractors for amounts under \$1 million for construction and/or professional services. **This percentage must equal or exceed the percentage listed by the agency on page 6, at line (1).**

NOTE: The "Calculated Target Subcontracting Percentage" MUST equal or exceed the Target Subcontracting Percentage listed by the agency on Page 6, Line (1).

SCHEDULE B - Subcontractor Utilization Plan – Part II: Bidder/Proposer Subcontracting Plan – cont.

Step 2:
Calculate value of subcontractor participation goals

a. Copy value from Step 1, line (4) – the total value of all expected subcontracts Under \$1M for construction and/or professional services

Subcontracts under \$1M
(construction/professional services)

\$ 518,551.76

b. From line a. above, allocate the dollar value of "Subcontracts under \$1M" by Construction and Professional Services.
If all subcontracts under \$1M are in one industry, enter "0" for the industry with no subcontracts.
Amounts listed on these lines should add up to the value from line a.

Construction **Professional Services**

\$ 518,551.76 \$ _____

Subcontracts under \$1M by industry

For Construction enter percentage from line (2) from Page 6.
For Professional Services enter percentage from line (3) from Page 6.

c. Total Participation Goals Percentages must be copied from Part I, lines (2) and (3).

Total Participation Goals

x 50 % x _____ %

d. Value of Total Participation Goals

\$ 259,275.88 \$ _____

Step 3: Enter brief description of type(s) of subcontracts in amounts under \$1M anticipated, by Type of work, not by name of subcontractor

✓ Subcontracts in Amounts Under \$1 M Scope of Work – Construction

Asphalt - 80,000 } MBE
Trucking - 180,000 }

✓ Subcontracts in Amounts Under \$1 M Scope of Work – Professional Services

Enter brief description of type(s) of subcontracts in amounts under \$1M anticipated, by Type of work, not by name of subcontractor

Section IV: Vendor Certification and Required Affirmations

I hereby 1) acknowledge my understanding of the M/WBE requirements as set forth herein and the pertinent provisions of Local Law 129 of 2005, and the rules promulgated thereunder; 2) affirm that the information supplied in support of this subcontractor utilization plan is true and correct; 3) agree, if awarded this Contract, to comply with the M/WBE requirements of this Contract and the pertinent provisions of Local Law 129 of 2005, 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 subcontract(s) sufficient to meet the Target Subcontracting Percentage, unless a waiver is obtained, and the Vendor will award subcontract(s) sufficient to meet the Total Participation Goals unless such goals are modified by the Agency; and 5) agree and affirm, if awarded this contract the Vendor intends to make all reasonable, good faith efforts to meet the Target Subcontracting Percentage, or if the Vendor has obtained a waiver, the Vendor intends to meet the modified Target Subcontracting Percentage, if any, and the Vendor intends to solicit and obtain the participation of M/WBEs so as to meet the Total Participation Goals unless modified by the Agency.

Signature [Signature] Date 6/4/13
Print Name Carlo Arzu Title President

SCHEDULE B - PART III - REQUEST FOR WAIVER OF TARGET SUBCONTRACTING PERCENTAGE

Contract Overview

Tax ID # _____ FMS Vendor ID # _____
 Business Name _____
 Contact Name _____ Telephone # _____ Email _____
 Type of Procurement Competitive Sealed Bids Other Bid/Response Due Date _____
 PIN # (for this procurement) _____ Type of work on Prime Contract _____ Type of work on Subcontract (Check all that apply):
 (Check one):
 Construction Construction Other
 Professional Services Professional Services

SUBCONTRACTING as described in bid/solicitation documents (Copy this % figure from the solicitation)
 _____ % of the total contract value anticipated by the agency to be subcontracted for construction/professional services subcontracts valued below \$1 million (each)

ACTUAL SUBCONTRACTING as anticipated by vendor seeking waiver
 _____ % of the total contract value anticipated in good faith by the bidder/proposer to be subcontracted for construction/professional services subcontracts valued below \$1 million (each)

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

- Vendor does not subcontract construction/professional services, and has the capacity and good faith intention to perform all such work itself.
- Vendor subcontracts some of this type of work but at lower % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract.
- Other _____

References

List 3 most recent contracts/subcontracts performed for NYC agencies (if any)

CONTRACT NO. _____ AGENCY _____ DATE COMPLETED _____
 CONTRACT NO. _____ AGENCY _____ DATE COMPLETED _____
 CONTRACT NO. _____ AGENCY _____ DATE COMPLETED _____

List 3 most recent contracts/subcontracts performed for other agencies/entities (complete ONLY if vendor has performed fewer than 3 NYC contracts)

TYPE OF WORK. _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at agency/entity that hired vendor (Name/Phone No.) _____
 TYPE OF WORK. _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at agency/entity that hired vendor (Name/Phone No.) _____
 TYPE OF WORK. _____ AGENCY/ENTITY _____ DATE COMPLETED _____
 Manager at agency/entity that hired vendor (Name/Phone No.) _____

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: _____

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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: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

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

BID BOOKLET

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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. 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. Bidder's Certification of Compliance with Iran Divestment Act
9. Special Experience Requirements (if applicable)
10. Apprenticeship Program Questionnaire (if applicable)

**FAILURE TO SUBMIT ITEMS (4) THROUGH (10)
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 additional information is required, please contact the Department of Design and Construction at 718-391- 2601.
- (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 and 4 of this Bid Booklet.

SPECIAL NOTICE TO BIDDERS
SPECIAL EXPERIENCE REQUIREMENTS (Revised 02/2007)

- (A) **EXPERIENCE REQUIREMENTS FOR THE BIDDER:** 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 requirements set forth below under Article (B) apply to this contract where indicated by a blackened box (■) or by X in a □ to left.

- (B) **EXPERIENCE REQUIREMENTS FOR INSTALLER OF TRUNK WATER MAIN:** The special experience requirements set forth below apply to the contractor who will install the Trunk Water Main. 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 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.

- (1) The contractor who will install the Trunk Water Main 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.

- (C) **SUBMISSION REQUIREMENTS:** For each project submitted to meet the experience requirements set forth above, the bidder must complete and submit the Qualification Form set forth in the Bid Booklet. Separate Qualification Forms shall be provided for bidder and the contractor who will install the Trunk Water Main.

- (D) **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.

- (1) 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 months or more from the inception of the bidding entity.
- (2) 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.

- (E) **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.

- (F) **COMPLIANCE:** Compliance with the experience requirements set forth herein will be determined solely by the City, prior to an award of contract. The bidder is advised that failure to meet the above described experience will result in the rejection of the bid as non-responsive.

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: HWPLZ004M

Description and Location of Work:

RECONSTRUCTION OF PERSHING SQUARE WEST

PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET

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

Together With All Work Incidental Thereto

BOROUGH OF MANHATTAN
CITY OF NEW YORK

Documents Available At:

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

Submission of Bids To:

30-30 Thomson Avenue
First Floor Bid Procurement Room
Long Island City, New York 11101
Before 11:00 A.M. on MAY 29, 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 MAY 29, 2013

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

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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) shall comply with the requirements of the corresponding numerical Sections of the NYCDOT Standard Highway Specifications, dated November 1, 2010, as amended by Addendum No. 1, herein Volume 3 of 3, except for items beginning with the number 8.01.

Items listed in this Bid Schedule beginning with the number 8.01 followed by a letter (e.g. 8.01 C2) shall comply with the requirements of the corresponding numerical Sections of the DDC Specifications for Handling, Transportation and Disposal of Nonhazardous and Potentially Hazardous Contaminated Materials contained in Addendum No. 6, 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. 52.11D12) 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 "6" followed by a decimal (e.g. 60.12D06, with exclusion of item 67.11AA36) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) Standard Water Main Specifications, dated August 1, 2009, and as amended by Addendum No. 2, herein Volume 3 of 3.

Item 67.11AA36 listed in this Bid Schedule shall comply with the requirements of Section 67.11 incorporated in Addendum No. 4, 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, with exclusion of item 79.11AATA) shall comply with the requirements of the New York City Department of Environmental Protection (NYCDEP) Standard Sewer Specifications, dated August 1, 2009, or the NYCDEP Standard Water Main Specifications dated August 1, 2009, and as amended by Addendum No. 2, herein Volume 3 of 3.

Item 79.11AATA listed in this Bid Schedule shall comply with the requirements of Section 79.11 incorporated in Addendum No. 5, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "BMP" (e.g. BMP-GI-7.17G) shall comply with the requirements of the

corresponding alphanumeric Sections incorporated in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with letter "E" (e.g. E 260500) shall comply with the requirements of the corresponding Section incorporated in Addendum No. 1, herein Volume 3 of 3.

Item HW-900H listed in this Bid Schedule shall comply with the requirements of Section HW-900H incorporated in Addendum No. 1, herein Volume 3 of 3.

Item NYCT-7A.1 listed in this Bid Schedule shall comply with the requirements of Section NYCT-7A incorporated in Addendum No. 1, herein Volume 3 of 3.

Item PER-BP and Item PER-DW listed in this Bid Schedule shall comply with the requirements of Section PER-BP and Section PER-DW, respectively, incorporated in Addendum No. 1, herein Volume 3 of 3.

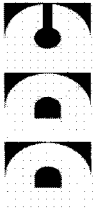
Items listed in this Bid Schedule with the prefix "PK-" (e.g. PK-13D, PK-143, etc.) are modified or new versions of NYCDPR Items and shall comply with the requirements of the corresponding alphanumeric Sections incorporated in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "SL-" (e.g. SL-20.02.02) are Street Lighting Items less the prefix, which shall be done in accordance with the requirements of Sub-Section 1.06.23.(D) and Section 1.06.49 in the Standard Highway Specifications.

Items listed in this Bid Schedule beginning with the prefix "T-" (e.g. T-8.9) are Traffic Items less the prefix, which shall be done in accordance with the requirements of Sub-Section 1.06.23.(D) and Section 1.06.49 in the Standard Highway Specifications, except for Item No. "T-60000B" which shall comply with the requirements of Section T-60000B in Addendum No. 1, herein Volume 3 of 3.

Items listed in this Bid Schedule beginning with the prefix "UTL-" (e.g. UTL-6.07) are for Gas Cost Sharing (EP-7) work and shall comply with the requirements of Addendum No. 3, herein Volume 3 of 3.

Contract PIN 8502013HW0043C
Project ID HWPLZ004M



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

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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 several classes of work 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 5 shall be the product of the Estimated Quantity in Column 2 times the Unit Price Bid in Column 4.
- (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 - 71

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BID PAGES

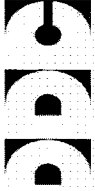


NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

Contract PIN 8502013HW0043C
Project ID HWFLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.02 AF-R (001)	4,200.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 2" THICK	\$		\$	
4.02 AG (002)	5,000.0 S.Y.	ASPHALTIC CONCRETE WEARING COURSE, 3" THICK	\$		\$	
4.02 CB (003)	1,943.0 TONS	ASPHALTIC CONCRETE MIXTURE	\$		\$	
4.04 BPB (004)	339.0 C.Y.	CONCRETE BASE FOR PAVERS, THICKNESS AS SPECIFIED, CLASS B-32	\$		\$	

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

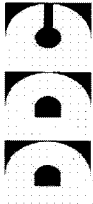
Contract PIN 8502013HW0043C
 Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.04 H (005)	850.0 C.Y.	CONCRETE BASE FOR PAVEMENT, VARIABLE THICKNESS FOR TRENCH RESTORATION, (HIGH-EARLY STRENGTH)	\$ _____	_____	\$ _____	_____
4.04 HD (006)	230.0 C.Y.	CONCRETE BASE FOR PAVEMENT, 9" THICK (HIGH-EARLY STRENGTH)	\$ _____	_____	\$ _____	_____
4.06 (007)	68.0 C.Y.	CONCRETE IN STRUCTURES, CLASS A-40	\$ _____	_____	\$ _____	_____
4.07 BA (008)	30.0 L.F.	RESET GRANITE CURB	\$ _____	_____	\$ _____	_____

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BID PAGES



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DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

Contract PIN

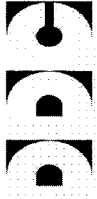
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Project ID

HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.07 CB (009)	190.0 L.F.	NEW GRANITE CURB, STRAIGHT	\$		\$	
4.07 CC (010)	100.0 L.F.	NEW GRANITE CURB, CORNER	\$		\$	
4.07 DB (011)	160.0 L.F.	NEW GRANITE CURB, STRAIGHT (1'-0" WIDE)	\$		\$	
4.07 DC (012)	90.0 L.F.	NEW GRANITE CURB, CORNER (1'-0" WIDE)	\$		\$	

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 BID PAGES



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 DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

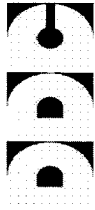
Contract PIN 8502013HW0043C
 Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)
			DOLLARS	CTS	DOLLARS	CTS
4.07 DD (013)	70.0 L.F.	NEW STRAIGHT GRANITE CURB, DEPRESSED AND TRANSITION (1'-0" WIDE)	\$ _____	_____	\$ _____
4.07 DE (014)	80.0 L.F.	NEW GRANITE CURB. STRAIGHT (6" WIDE)	\$ _____	_____	\$ _____
4.09 AD (015)	10.0 L.F.	STRAIGHT STEEL FACED CONCRETE CURB (18" DEEP)	\$ _____	_____	\$ _____
4.13 AAS (016)	595.0 S.F.	4" CONCRETE SIDEWALK (UNPIGMENTED)	\$ _____	_____	\$ _____

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

Contract PIN

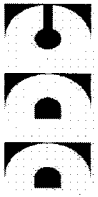
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Project ID

HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)
			DOLLARS	CTS	
4.13 DE (017)	40.0 S.F.	EMBEDDED PREFORMED DETECTABLE WARNING UNITS	\$	.	\$
4.13 DS (018)	48.0 S.F.	DETECTABLE WARNING SURFACE - SPECIAL PRECAST	\$	.	\$
4.14 (019)	7,900.0 LBS.	STEEL REINFORCEMENT BARS	\$.	\$
4.14 W (020)	4,200.0 LBS.	WELDED STEEL WIRE FABRIC	\$.	\$

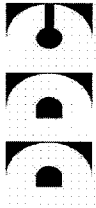
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BID PAGES



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

Contract PIN 8502013HW0043C
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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)
			DOLLARS	CTS	
4.15 LSM (021)	5.0 C.Y.	LIGHTWEIGHT SOIL MEDIUM	\$ _____	_____ CTS	\$ _____
4.15 SSM (022)	38.0 C.Y.	STRUCTURAL TOPSOIL	\$ _____	_____ CTS	\$ _____
4.15 UPMB (023)	37.0 C.Y.	URBAN PLANTING MIX	\$ _____	_____ CTS	\$ _____
4.16 AA (024)	6.0 EACH	TREES REMOVED (4" TO UNDER 12" CALIPER)	\$ _____	_____ CTS	\$ _____

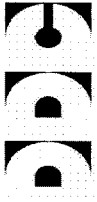


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BID PAGES

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

Contract PIN 8502013HW0043C
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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.16 CGTI (025)	10.0 EACH	TREES PLANTED, 3" to 3-1/2" Caliper, Gleditsia Triacanthos Inermis Shademaster	\$ _____	_____	\$ _____	_____
4.17 OG2G (026)	140.0 EACH	ORNAMENTAL GRASS PLANTED, 2 GALLON	\$ _____	_____	\$ _____	_____
4.17 OG3G (027)	60.0 EACH	ORNAMENTAL GRASS PLANTED, 3 GALLON	\$ _____	_____	\$ _____	_____
4.17 OG5G (028)	51.0 EACH	ORNAMENTAL GRASS PLANTED, 5 GALLON	\$ _____	_____	\$ _____	_____



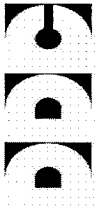
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Contract PIN 8502013HW0043C
Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
4.17 PG2G (029)	220.0 EACH	PERENNIALS OR GROUNDCOVERS, PLANTED, 2 GALLON, ALL TYPES	\$		\$	
4.18 DM (030)	200.0 S.F.	GEOTEXTILE/COMPOSITE DRAINAGE MAT	\$		\$	
4.18 RB (031)	60.0 S.Y.	ROOT BARRIER FABRIC	\$		\$	
4.21 (032)	18.0 P/HR	TREE CONSULTANT	\$		\$	

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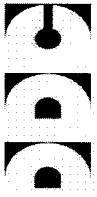


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Contract PIN 8502013HW0043C
 Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
50.41M6C12 (033)	220.0 L.F.	12" D.I.P. CLASS 56 STORM SEWER, ON CONCRETE CRADLE	\$	.	\$	.
50.41M6C16 (034)	130.0 L.F.	16" D.I.P. CLASS 56 STORM SEWER, ON CONCRETE CRADLE	\$	.	\$	.
51.21C000012D (035)	1.0 EACH	CLEANOUT MANHOLE ON 12" D.I.P. SEWER	\$.	\$.
51.21C000016D (036)	3.0 EACH	CLEANOUT MANHOLE ON 16" D.I.P. SEWER	\$.	\$.

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			DOLLARS	CTS	DOLLARS	CTS
51.21S0A100V (037)	1.0 EACH	STANDARD MANHOLE TYPE A-1	\$ _____	_____	\$ _____	_____
51.22RM (038)	2.0 EACH	RECONSTRUCTION OF EXISTING MANHOLE ON EXISTING SEWER	\$ _____	_____	\$ _____	_____
51.23RF (039)	2.0 EACH	REPLACEMENT OF EXISTING MANHOLE FRAME AND COVER	\$ _____	_____	\$ _____	_____
51.41P000 (040)	1.0 EACH	SPECIAL CATCH BASIN	\$ _____	_____	\$ _____	_____



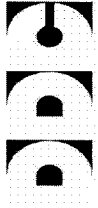
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			DOLLARS	CTS	DOLLARS	CTS
51.41S001 (041)	1.0 EACH	STANDARD CATCH BASIN, TYPE 1	\$ _____	_____ CTS	\$ _____	_____ CTS
51.41S002 (042)	1.0 EACH	STANDARD CATCH BASIN, TYPE 2	\$ _____	_____ CTS	\$ _____	_____ CTS
51.41W000 (043)	2.0 EACH	SHALLOW CATCH BASIN	\$ _____	_____ CTS	\$ _____	_____ CTS
52.11D06 (044)	70.0 L.F.	6" DUCTILE IRON PIPE BASIN CONNECTION	\$ _____	_____ CTS	\$ _____	_____ CTS

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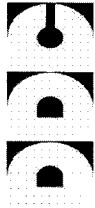
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			DOLLARS	CTS	DOLLARS	CTS
54.12CS (045)	20.0 C.Y.	CLEANING OF DRAINAGE STRUCTURES	\$		\$	
55.11AB (046)	2.0 EACH	ABANDONING BASINS AND INLETS	\$		\$	
6.02 AAN (047)	4,060.0 C.Y.	UNCLASSIFIED EXCAVATION	\$		\$	
6.02 XHEC (048)	920.0 C.Y.	INCREMENTAL COST FOR MODIFYING WORK METHODS NEAR (WITHIN 3 FEET OF) TRANSIT FACILITIES AND BUILDING VAULTS	\$		\$	

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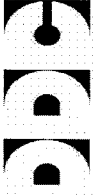
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COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)
			DOLLARS	CTS	
6.02 XSCW (049)	2,075.0 C.Y.	INCREMENTAL COST FOR USING SPECIAL CARE WORK METHODS NEAR (FROM 3 FEET TO 50 FEET) TRANSIT FACILITIES	\$		\$
6.04 DG (050)	5.0 S.Y.	DECORATIVE GRAVEL	\$		\$
6.06 GS (051)	35.0 S.Y.	RESET GRANITE SLAB SIDEWALK (ON MORTAR SETTING BED)	\$		\$
6.25 RS (052)	1,300.0 S.F.	TEMPORARY SIGNS	\$		\$

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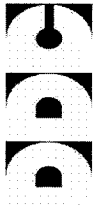


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			DOLLARS	CTS	DOLLARS	CTS
6.26 (053)	3,390.0 L.F.	TIMBER CURB	\$		\$	
6.28 AA (054)	2,150.0 L.F.	LIGHTED TIMBER BARRICADES	\$		\$	
6.28 ME (055)	3,300.0 L.F.	LIGHTED TIMBER FENCING FOR USE IN LOWER MANHATTAN PROJECTS	\$		\$	
6.34 ACTP (056)	3,300.0 L.F.	TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	\$		\$	

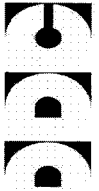
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			DOLLARS	CTS	DOLLARS	CTS
6.40 D (057)	30.0 MONTH	ENGINEER'S FIELD OFFICE (TYPE D)	\$		\$	
6.44 (058)	16,900.0 L.F.	THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE)	\$		\$	
6.47 PCB (059)	2,113.0 S.F.	FURNISH AND INSTALL CONCRETE PAVERS	\$		\$	
6.52 (060)	3,000.0 P/HR	UNIFORMED FULL-TIME FLAGPERSON	\$		\$	

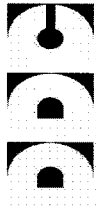


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			DOLLARS	CTS	
6.59 PF (061)	210.0 L.F.	TEMPORARY CONCRETE BARRIER WITH FENCE	\$ _____	_____	\$ _____
6.60 B (062)	1,270.0 S.Y.	FURNISH AND INSTALL ASPHALT BLOCK PAVERS	\$ _____	_____	\$ _____
6.67 (063)	260.0 C.Y.	SUBBASE COURSE, SELECT GRANULAR MATERIAL	\$ _____	_____	\$ _____
6.68 (064)	376.0 S.Y.	PLASTIC FILTER FABRIC	\$ _____	_____	\$ _____



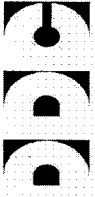
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			DOLLARS	CTS	DOLLARS	CTS
6.74 BE (065)	92.0 L.F.	BRONZE RAISED EDGING	\$		\$	
6.74 BV (066)	111.0 S.F.	BRONZE VENEER	\$		\$	
6.74 PRA (067)	124.0 L.F.	PAVER RESTRAINT ANCHORAGE	\$		\$	
6.74 PRE (068)	124.0 L.F.	PAVER RESTRAINT EDGE	\$		\$	

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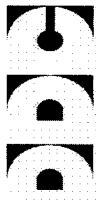


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			DOLLARS	CTS	DOLLARS
6.82 A (069)	10.0 S.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGNS	\$ _____	_____	\$ _____
6.82 B (070)	30.0 L.F.	REMOVING EXISTING TRAFFIC AND STREET NAME SIGN POSTS	\$ _____	_____	\$ _____
6.83 AA (071)	40.0 S.F.	FURNISHING NEW NON-REFLECTORIZED TRAFFIC SIGNS	\$ _____	_____	\$ _____
6.83 AB (072)	100.0 L.F.	FURNISHING NEW TRAFFIC SIGN POSTS	\$ _____	_____	\$ _____

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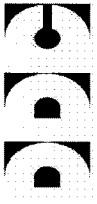


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			DOLLARS	CTS	DOLLARS	CTS
6.83 BA (073)	40.0 S.F.	INSTALLING TRAFFIC SIGNS	\$		\$	
6.83 BB (074)	100.0 L.F.	INSTALLING TRAFFIC SIGN POSTS	\$		\$	
6.85 A (075)	1.0 F.S.	TRAFFIC ENFORCEMENT AGENTS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 158,555.30	\$	158,555.30	\$	158,555.30
6.87 (076)	11,120.0 EACH	PLASTIC BARRELS	\$		\$	

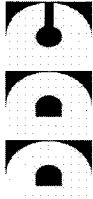
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			DOLLARS	CTS	
6.97 A (077)	990.0 C.Y.	EXTRA-HIGH-EARLY STRENGTH CONCRETE	\$ _____	_____ CTS	\$ _____
60.11R520 (078)	700.0 L.F.	FURNISHING AND DELIVERING 20-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ _____	_____ CTS	\$ _____
60.11R530 (079)	15.0 L.F.	FURNISHING AND DELIVERING 30-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ _____	_____ CTS	\$ _____
60.11R548 (080)	95.0 L.F.	FURNISHING AND DELIVERING 48-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 55)	\$ _____	_____ CTS	\$ _____



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			DOLLARS	CTS	DOLLARS	CTS
60.11R606 (081)	270.0 L.F.	FURNISHING AND DELIVERING 6-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$		\$	
60.11R612 (082)	2,040.0 L.F.	FURNISHING AND DELIVERING 12-INCH DUCTILE IRON RESTRAINED JOINT PIPE (CLASS 56)	\$		\$	
60.12D06 (083)	455.0 L.F.	LAYING 6-INCH DUCTILE IRON PIPE AND FITTINGS	\$		\$	
60.12D12 (084)	2,330.0 L.F.	LAYING 12-INCH DUCTILE IRON PIPE AND FITTINGS	\$		\$	

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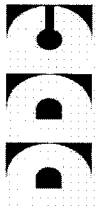


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			DOLLARS	CTS	DOLLARS	CTS
60.12D20 (085)	845.0 L.F.	LAYING 20-INCH DUCTILE IRON PIPE AND FITTINGS	\$		\$	
60.12D30 (086)	25.0 L.F.	LAYING 30-INCH DUCTILE IRON PIPE AND FITTINGS	\$		\$	
60.12D48 (087)	105.0 L.F.	LAYING 48-INCH DUCTILE IRON PIPE AND FITTINGS	\$		\$	
60.13M0A24 (088)	22.0 TONS	FURNISHING AND DELIVERING DUCTILE IRON MECHANICAL JOINT 24-INCH DIAMETER AND SMALLER FITTINGS, INCLUDING WEDGE TYPE RETAINER GLANDS	\$		\$	

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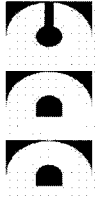


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			DOLLARS	CTS	
60.13M5R30 (089)	1.0 EACH	FURNISHING AND DELIVERING 30-INCH DUCTILE IRON MECHANICAL JOINT REDUCERS (CLASS 55)	\$ _____	_____	\$ _____
60.13M5R48 (090)	1.0 EACH	FURNISHING AND DELIVERING 48-INCH DUCTILE IRON MECHANICAL JOINT REDUCERS (CLASS 55)	\$ _____	_____	\$ _____
60.13M5S30 (091)	1.0 EACH	FURNISHING AND DELIVERING 30-INCH DUCTILE IRON MECHANICAL JOINT SLEEVES (CLASS 55)	\$ _____	_____	\$ _____
60.13M5S48 (092)	1.0 EACH	FURNISHING AND DELIVERING 48-INCH DUCTILE IRON MECHANICAL JOINT SLEEVES (CLASS 55)	\$ _____	_____	\$ _____

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			DOLLARS	CTS	DOLLARS	CTS
60.18BJC20EL (093)	9.0 EACH	FURNISHING, DELIVERING AND INSTALLING BELL JOINT CLAMPS, COMPLETE FOR 20-INCH PIPE AND LESS	\$		\$	
60.21SP3T30 (094)	120.0 L.F.	FURNISHING, DELIVERING AND LAYING 30-INCH STRAIGHT STEEL PIPE, 3/8-INCH WALL THICKNESS	\$		\$	
60.21SP3T36 (095)	60.0 L.F.	FURNISHING, DELIVERING AND LAYING 36-INCH STRAIGHT STEEL PIPE, 3/8-INCH WALL THICKNESS	\$		\$	
60.21SP4T48 (096)	1,230.0 L.F.	FURNISHING, DELIVERING AND LAYING 48-INCH STRAIGHT STEEL PIPE, 1/2-INCH WALL THICKNESS	\$		\$	

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			DOLLARS	CTS	DOLLARS	CTS
60.22BR3T30 (097)	10.0 L.F.	FURNISHING, DELIVERING AND LAYING 30-INCH STEEL BENDS AND REDUCERS, 3/8-INCH WALL THICKNESS	\$		\$	
60.22BR4T48 (098)	75.0 L.F.	FURNISHING, DELIVERING AND LAYING 48-INCH STEEL BENDS AND REDUCERS, 1/2-INCH WALL THICKNESS	\$		\$	
60.25PSO (099)	10,000.0 LBS.	FURNISHING, DELIVERING AND INSTALLING PLATE STEEL OUTLETS ON STEEL PIPE, ACCESS MANHOLE OUTLETS WITH COVERS, AND NUTS AND BOLTS COMPLETE	\$		\$	
60.27RSC36 (100)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH DIAMETER BOLTED, SPLIT SLEEVE-TYPE RESTRAINED COUPLING	\$		\$	

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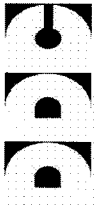


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			DOLLARS	CTS	
60.27RSC48 (101)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 48-INCH DIAMETER BOLTED, SPLIT SLEEVE-TYPE RESTRAINED COUPLING	\$		\$
60.29CP (102)	1.0 L.S.	FURNISHING, INSTALLING AND TESTING CORROSION CONTROL AND/OR CATHODIC PROTECTION SYSTEM	\$		\$
61.11DFM06 (103)	4.0 EACH	FURNISHING AND DELIVERING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$		\$
61.11DFM20 (104)	3.0 EACH	FURNISHING AND DELIVERING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$		\$

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			DOLLARS	CTS	DOLLARS	CTS
61.11DMM06 (105)	11.0 EACH	FURNISHING AND DELIVERING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$		\$	
61.11DMM12 (106)	11.0 EACH	FURNISHING AND DELIVERING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$		\$	
61.11DMM20 (107)	3.0 EACH	FURNISHING AND DELIVERING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$		\$	
61.11TWC03 (108)	4.0 EACH	FURNISHING AND DELIVERING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$		\$	

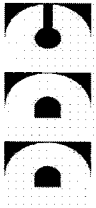
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			DOLLARS	CTS	
61.11TWC04 (109)	4.0 EACH	FURNISHING AND DELIVERING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____	\$ _____
61.11TWC06 (110)	3.0 EACH	FURNISHING AND DELIVERING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____	\$ _____
61.11TWC08 (111)	4.0 EACH	FURNISHING AND DELIVERING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____	\$ _____
61.11TWC12 (112)	1.0 EACH	FURNISHING AND DELIVERING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____	\$ _____



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			DOLLARS	CTS	
61.12DFM06 (113)	4.0 EACH	SETTING 6-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$	—	\$
61.12DFM20 (114)	3.0 EACH	SETTING 20-INCH FLANGED-MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLAND	\$	—	\$
61.12DMM06 (115)	13.0 EACH	SETTING 6-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$	—	\$
61.12DMM12 (116)	13.0 EACH	SETTING 12-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$	—	\$

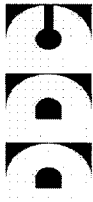


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			DOLLARS	CTS	
61.12DMM20 (117)	4.0 EACH	SETTING 20-INCH MECHANICAL JOINT DUCTILE IRON GATE VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____ CTS	\$ _____
61.12TWC03 (118)	4.0 EACH	SETTING 3-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____ CTS	\$ _____
61.12TWC04 (119)	4.0 EACH	SETTING 4-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____ CTS	\$ _____
61.12TWC06 (120)	3.0 EACH	SETTING 6-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$ _____	_____ CTS	\$ _____



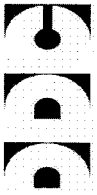
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			DOLLARS	CTS	DOLLARS	CTS
61.12TWC08 (121)	4.0 EACH	SETTING 8-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$.	\$.
61.12TWC12 (122)	1.0 EACH	SETTING 12-INCH WET CONNECTION TAPPING VALVE COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$	.	\$	.
61.21BVB36 (123)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH BUTTERFLY VALVE WITH BY-PASS ARRANGEMENT AND OUTLET, COMPLETE	\$	.	\$	.
61.21BVB48 (124)	1.0 EACH	FURNISHING, DELIVERING AND INSTALLING 48-INCH BUTTERFLY VALVE WITH BY-PASS ARRANGEMENT AND OUTLET, COMPLETE	\$.	\$.

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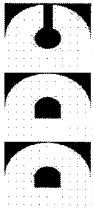


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			DOLLARS	CTS	DOLLARS	CTS
62.11SD (125)	13.0 EACH	FURNISHING AND DELIVERING HYDRANTS	\$		\$	
62.12SG (126)	13.0 EACH	SETTING HYDRANTS COMPLETE WITH WEDGE TYPE RETAINER GLANDS	\$		\$	
62.13RH (127)	10.0 EACH	REMOVING HYDRANTS	\$		\$	
62.14FS (128)	39.0 EACH	FURNISHING, DELIVERING AND INSTALLING HYDRANT FENDERS	\$		\$	

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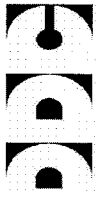


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			DOLLARS	CTS	DOLLARS	CTS
63.11MH (129)	4.0 TONS	FURNISHING, DELIVERING AND INSTALLING 36-INCH CAST IRON MANHOLE HEADS AND COVERS	\$		\$	
63.11MS (130)	120.0 EACH	FURNISHING, DELIVERING AND INSTALLING MANHOLE STEPS TYPE PS2-PF	\$		\$	
63.11VC (131)	24.0 TONS	FURNISHING AND DELIVERING VARIOUS CASTINGS	\$		\$	
64.11EL (132)	18.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING 1-1/2-INCH OR LARGER SCREW TAPS	\$		\$	

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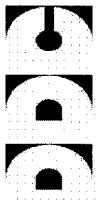


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			DOLLARS	CTS	DOLLARS	CTS
64.11ST (133)	25.0 EACH	WITHDRAWING AND REPLACING HOUSE SERVICES USING SMALLER THAN 1-1/2-INCH SCREW TAPS	\$		\$	
64.12COEG (134)	60.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$		\$	
64.12COLT (135)	80.0 L.F.	CUTTING AND OFFSETTING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$		\$	
64.12ESEG (136)	180.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (EQUAL TO OR GREATER THAN 3-INCH DIAMETER)	\$		\$	

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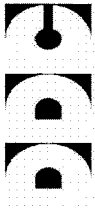


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			DOLLARS	CTS	DOLLARS	CTS
64.12ESLT (137)	40.0 L.F.	EXTENDING HOUSE SERVICE WATER CONNECTIONS (LESS THAN 3-INCH DIAMETER)	\$		\$	
64.13WC12 (138)	14.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 12-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$		\$	
64.13WC20 (139)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING WET CONNECTION SLEEVE ON 20-INCH WATER MAIN PIPE WITH VARIOUS OUTLETS	\$		\$	
65.11BR (140)	3,800.0 LBS.	FURNISHING, DELIVERING AND INSTALLING BANDS, RODS, WASHERS, ETC., COMPLETE, FOR RESTRAINING JOINTS	\$		\$	

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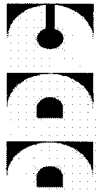
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			DOLLARS	CTS	
65.21PS (141)	2,715.0 L.F.	FURNISHING AND PLACING POLYETHYLENE SLEEVE Unit price bid shall not be less than: \$ 0.50	\$		\$
65.31FF (142)	49,900.0 S.F.	FURNISHING, DELIVERING AND PLACING FILTER FABRIC Unit price bid shall not be less than: \$ 0.10	\$		\$
65.41PS06 (143)	4.0 EACH	FURNISHING, DELIVERING AND INSTALLING 6-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$		\$
65.41PS20 (144)	6.0 EACH	FURNISHING, DELIVERING AND INSTALLING 20-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$		\$

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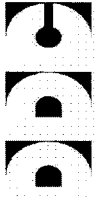
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			DOLLARS	CTS	
65.41PS30 (145)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING 30-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$		\$
65.41PS36 (146)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING 36-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$		\$
65.41PS48 (147)	2.0 EACH	FURNISHING, DELIVERING AND INSTALLING 48-INCH PIPE-TO-WALL PENETRATION SEAL, INCLUDING STEEL SLEEVE AND ANCHOR/WATER STOP PLATE	\$		\$
65.51PC (148)	300.0 C.Y.	FURNISHING AND PLACING CAST-IN-PLACE CONCRETE CLASS 40 AND PRECAST CONCRETE CLASS 50	\$		\$

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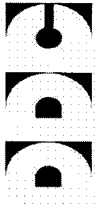


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			DOLLARS	CTS	DOLLARS	CTS
65.61SS (149)	38,000.0 LBS.	FURNISHING, DELIVERING AND PLACING STRUCTURAL, REINFORCING AND MISCELLANEOUS STEEL	\$		\$	
65.71SG (150)	1,300.0 C.Y.	FURNISHING, DELIVERING AND PLACING SCREENED GRAVEL OR SCREENED BROKEN STONE BEDDING	\$		\$	
67.11AA36 (151)	450.0 L.F.	INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING 36-INCH DIAMETER STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE	\$		\$	
7.01 P (152)	52.0 S.F.	FURNISH AND INSTALL NEW CUSTOM SUBWAY FRAMES AND GRATES	\$		\$	

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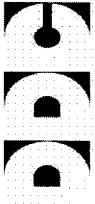


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			DOLLARS	CTS	DOLLARS	CTS
7.12 A (153)	6.0 EACH	PROCTOR ANALYSIS	\$		\$	
7.12 B (154)	6.0 EACH	IN-PLACE SOIL DENSITY TEST	\$		\$	
7.13 B (155)	24.0 MONTH	MAINTENANCE OF SITE Unit price bid shall not be less than: \$ 12,000.00	\$		\$	
7.17 (156)	32.0 C.Y.	OPEN-GRADED STONE BASE	\$		\$	

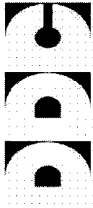
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			DOLLARS	CTS	DOLLARS	CTS
7.36 (157)	8,000.0 L.F.	PEDESTRIAN STEEL BARRICADES	\$		\$	
7.48 U2 (158)	20.0 L.F.	2" DIAMETER UNPERFORATED PVC PIPE	\$		\$	
7.50 RB (159)	52.0 L.F.	RIVER BENCH	\$		\$	
7.53 KBC (160)	39.0 EACH	CHAIR	\$		\$	

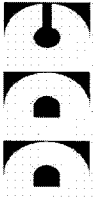


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			DOLLARS	CTS	DOLLARS	CTS
7.53 KBT (161)	13.0 EACH	TABLE	\$.	\$.
7.54 ADD (162)	1.0 EACH	CAST IRON DOME FRAME AND GRATE	\$.	\$.
7.54 AFD (163)	2.0 EACH	CAST IRON FLOOR DRAIN FRAME AND GRATE	\$.	\$.
7.54 BTD12 (164)	130.0 L.F.	BRONZE TRENCH DRAIN GRATE AND FRAME, 12 INCH WIDTH	\$.	\$.

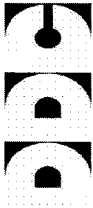


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			DOLLARS	CTS	DOLLARS	CTS
7.54 BTD8 (165)	40.0 L.F.	BRONZE TRENCH DRAIN GRATE AND FRAME, 8 INCH WIDTH	\$ _____	_____	\$ _____	_____
7.54 BTDV (166)	34.0 S.F.	BRONZE TRENCH DRAIN GRATE AND FRAME, VARIABLE WIDTH	\$ _____	_____	\$ _____	_____
7.54 BTG (167)	3.0 EACH	BRONZE TREE GRATE AND FRAME	\$ _____	_____	\$ _____	_____
7.55 BPR (168)	20.0 L.F.	BRONZE PLANTER RAILING	\$ _____	_____	\$ _____	_____



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			DOLLARS	CTS	DOLLARS	CTS
7.55 BSR (169)	18.0 L.F.	BRONZE STAIR RAILING	\$ _____	_____	\$ _____	_____
7.55 BTR (170)	105.0 L.F.	BRONZE TERRACE RAILING	\$ _____	_____	\$ _____	_____
7.88 AA (171)	1.0 L.S.	RODENT INFESTATION SURVEY AND MONITORING Unit price bid shall not be less than: \$ 5,300.00	\$ _____	_____	\$ _____	_____
7.88 AB (172)	480.0 EACH	RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 60.00	\$ _____	_____	\$ _____	_____

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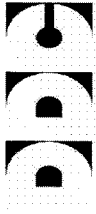
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			DOLLARS	CTS	
7.88 AC (173)	480.0 EACH	BAITING OF RODENT BAIT STATIONS Unit price bid shall not be less than: \$ 9.25	\$ _____	_____	\$ _____
7.88 AD (174)	17.0 BLOCK	WATERBUG BAIT APPLICATIONS Unit price bid shall not be less than: \$ 65.00	\$ _____	_____	\$ _____
70.21DK (175)	1,470.0 S.Y.	DECKING	\$ _____	_____	\$ _____
70.31FN (176)	9,900.0 L.F.	FENCING Unit price bid shall not be less than: \$ 2.00	\$ _____	_____	\$ _____

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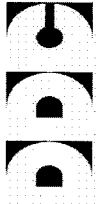
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			DOLLARS	CTS	DOLLARS	CTS
70.51EO (177)	10.0 C.Y.	EXCAVATION OF BOULDERS IN OPEN CUT Unit price bid shall not be less than: \$ 75.00	\$		\$	
70.61RE (178)	10.0 C.Y.	ROCK EXCAVATION	\$		\$	
70.81CB (179)	2,060.0 C.Y.	CLEAN BACKFILL Unit price bid shall not be less than: \$ 15.00	\$		\$	
70.91SW12 (180)	1,400.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 12-INCH IN DIAMETER AND LESS	\$		\$	

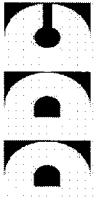


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			DOLLARS	CTS	
70.91SW20 (181)	8,060.0 S.F.	FURNISHING AND PLACING SHEETING AND BRACING IN TRENCH FOR WATER MAIN PIPE 20-INCH IN DIAMETER	\$ _____	_____	\$ _____
73.11AB (182)	10.0 C.Y.	ADDITIONAL BRICK MASONRY Unit price bid shall not be less than: \$ 62.50	\$ _____	_____	\$ _____
73.21AC (183)	30.0 C.Y.	ADDITIONAL CONCRETE Unit price bid shall not be less than: \$ 62.50	\$ _____	_____	\$ _____
73.31AE0 (184)	150.0 C.Y.	ADDITIONAL EARTH EXCAVATION INCLUDING TEST PITS (ALL DEPTHS) Unit price bid shall not be less than: \$ 20.00	\$ _____	_____	\$ _____



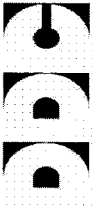
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DIVISION OF INFRASTRUCTURE - BUREAU OF DESIGN

Contract PIN 8502013HW0043C
Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
73.41AG (185)	190.0 C.Y.	ADDITIONAL SELECT GRANULAR BACKFILL Unit price bid shall not be less than: \$ 15.00	\$		\$	
79.11AATA (186)	1.0 F.S.	ALLOWANCE FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING TRANSIT AUTHORITY DUCT INSULATION (REMOVAL OF ACM, REPLACEMENT WITH NON-ACM, AND SUPPORT AND PROTECTION OF EXISTING TRANSIT AUTHORITY DUCT, COMPLETE) PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 100,000.00	\$	100,000.00	\$	100,000.00
8.01 C1 (187)	3,800.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOIL	\$		\$	
8.01 C2 (188)	4.0 SETS	SAMPLING AND TESTING OF CONTAMINATED/POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PURPOSES	\$		\$	

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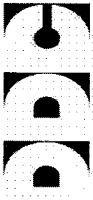


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			DOLLARS	CTS	
8.01 H (189)	10.0 TONS	HANDLING, TRANSPORTING AND DISPOSAL OF HAZARDOUS SOIL	\$ _____	_____	\$ _____
8.01 S (190)	1.0 L.S.	HEALTH AND SAFETY	\$ _____	_____	\$ _____
8.01 W1 (191)	7.0 DAY	REMOVAL, TREATMENT, AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER	\$ _____	_____	\$ _____
8.01 W2 (192)	1.0 SETS	SAMPLING AND TESTING OF WATER	\$ _____	_____	\$ _____

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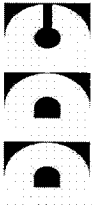


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			DOLLARS	CTS	
8.02 A (193)	10,540.0 S.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK WORK	\$		\$
8.02 B (194)	470.0 L.F.	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	\$		\$
8.08 (195)	2.0 EACH	VARIABLE MESSAGE BOARD	\$		\$
8.15 RDF (196)	1.0 EACH	RIVER DRINKING FOUNTAIN	\$		\$

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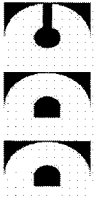


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			DOLLARS	CTS	
8.22 D (197)	6,400.0 S.F.	THREE PLY MEMBRANE WATERPROOFING	\$ _____	_____ CTS	\$ _____
9.00 C (198)	600.0 C.F.	EXPLORATORY TEST PITS	\$ _____	_____ CTS	\$ _____
9.06 HW (199)	1.0 F.S.	ALLOWANCE FOR DECORATIVE MESH FABRIC PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 150,000.00	\$ 150,000.00	_____ CTS	\$ 150,000.00
9.95 GCB (200)	168.0 C.F.	GRANITE CURB WALL	\$ _____	_____ CTS	\$ _____

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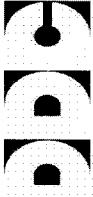


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			DOLLARS	CTS	DOLLARS	CTS
9.95 GPB (201)	231.0 S.F.	GRANITE PAVING BANDS	\$		\$	
9.95 GST (202)	169.0 L.F.	GRANITE STAIR TREADS	\$		\$	
BMP-GI-4.15ES (203)	22.0 C.Y.	ENGINEERED SOIL	\$		\$	
E 260519 G (204)	400.0 L.F.	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	\$		\$	

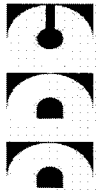
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			DOLLARS	CTS	
E 260526 (205)	110.0 L.F.	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	\$ _____	_____	\$ _____
E 260533 AB (206)	110.0 L.F.	METAL CONDUIT AND TUBING (1-1/4" GALVANIZED RIGID STEEL CONDUIT)	\$ _____	_____	\$ _____
E 262726 A (207)	2.0 EACH	GFCI RECEPTACLE (DUPLEX)	\$ _____	_____	\$ _____
E 262726 D (208)	2.0 EACH	SPRING WOUND MECHANICAL TIMER SWITCH	\$ _____	_____	\$ _____



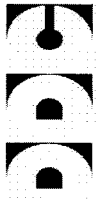
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			DOLLARS	CTS	DOLLARS	CTS
HW-900H (209)	1.0 F.S.	ALLOWANCE FOR CITY WORK ACCELERATION PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 500,000.00	\$ 500,000.00		\$ 500,000.00	
NYCT-7A.1 (210)	270.0 S.F.	MEMBRANE WATERPROOFING	\$		\$	
NYCT-7A.2 (211)	270.0 S.F.	WATERPROOFING PROTECTION BOARD	\$		\$	
PER-BP (212)	3.0 EACH	REMOVING AND REINSTALLING EXISTING BRONZE PLAQUES	\$		\$	

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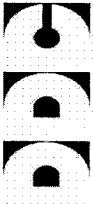


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			DOLLARS	CTS	DOLLARS	CTS
PER-DW (213)	95.0 S.F.	PLANTER DRAINAGE/WATER RETENTION SYSTEM	\$		\$	
PK-13D (214)	50.0 L.F.	TYPE K COPPER TUBING, 1" DIAMETER	\$		\$	
PK-17 (215)	2.0 EACH	CAST IRON VALVE BOX, 5-1/4" DIAMETER	\$		\$	
PK-184-GH1 (216)	1.0 EACH	GROUND HYDRANT - 1" DIAMETER	\$		\$	

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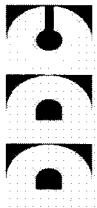


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			DOLLARS	CTS	DOLLARS	CTS
SL-100.01.02 (217)	1.0 EACH	FURNISH AND INSTALL FOUNDATION WITH 2 CONDUIT BENDS FOR STREET LAMPPOST AS PER DRAWINGS E-3788 AND J-5227	\$		\$	
SL-20.06.03 (218)	1.0 EACH	RELOCATE POST ON NEW FOUNDATION, WITH ALL APPURTENANT EQUIPMENT WITHIN 500ft. FOUNDATION AS PER DRAWINGS E-3788 OR H-5253. REMOVE PORTION OF OLD FOUNDATION TO 10" BELOW GRADE.	\$		\$	
SL-33.01.02 (219)	100.0 L.F.	FURNISH AND INSTALL NO. 6 AWG XLP COPPER CABLE OR EQUAL IN CONDUIT	\$		\$	
SL-35.12.02 (220)	47.0 L.F.	FURNISH ALL LABOR, MATERIAL AND EQUIPMENT TO DRIVE A 2" CONDUIT UNDER ROADWAY OR DESIGNATED AREA. CONDUIT INCLUDED IN ITEM.	\$		\$	

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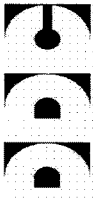


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			DOLLARS	CTS	DOLLARS	CTS
SL-39.01.01 (221)	1.0 EACH	FURNISH ALL LABOR, MATERIAL AND EQUIPMENT TO DISCONNECT ENERGY SUPPLY TO A LAMP, ON A LAMPPOST.	\$ _____	_____	\$ _____	_____
SL-39.01.02 (222)	1.0 EACH	FURNISH ALL LABOR, MATERIAL AND EQUIPMENT TO CONNECT ENERGY SUPPLY TO A LAMP, ON A LAMPPOST.	\$ _____	_____	\$ _____	_____
T-1.1 (223)	3.0 EACH	INSTALL TYPE "S" OR "T" FOUNDATION	\$ _____	_____	\$ _____	_____
T-1.18 (224)	2.0 EACH	REMOVE TYPE "A", "B", "S" OR "T" SERIES FOUNDATION	\$ _____	_____	\$ _____	_____

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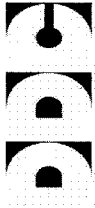


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			DOLLARS	CTS	DOLLARS	CTS
T-2.1 (225)	3.0 EACH	INSTALL TYPE "S-1" OR "T-1" SERIES POST	\$		\$	
T-2.16 (226)	2.0 EACH	FURNISH, INSTALL, MAINTAIN AND REMOVE TEMPORARY POST OR PYLON WITH SIGNALS	\$		\$	
T-2.22 (227)	2.0 EACH	REMOVE TYPE "S-1" OR "T-1" SERIES POST	\$		\$	
T-2.28 (228)	1.0 EACH	REMOVE MAST ARM FROM ANY POST	\$		\$	

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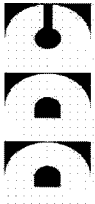


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			DOLLARS	CTS	
T-20000 (229)	2.0 EACH	FURNISH TEN FOOT ALUMINUM SIGNAL POST TYPE "S-1"	\$		\$
T-20020 (230)	9.0 EACH	a) FURNISH 3/4" ANCHOR BOLT ASSEMBLIES FOR S-1 (EACH) (3 REQUIRED PER POST)	\$		\$
T-3.1 (231)	1.0 EACH	INSTALL "ONE-WAY" SIGNAL UNIT ON MAST ARM OR TOP OF TRAFFIC POST	\$		\$
T-3.15 (232)	2.0 EACH	HOOD ONE SIGNAL HEAD	\$		\$

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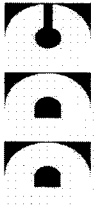


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			DOLLARS	CTS	DOLLARS	CTS
T-3.18 (233)	6.0 EACH	REMOVE SIGNAL HEAD FROM ANY TYPE POST	\$		\$	
T-3.21 (234)	7.0 EACH	REMOVE PEDESTRIAN SIGNAL OR SIGN UNIT OR OTHER ILLUMINATED SIGNS FROM ANY POST	\$		\$	
T-3.6 (235)	4.0 EACH	INSTALL PEDESTRIAN SIGNAL ON ANY TYPE POST	\$		\$	
T-3.7 (236)	4.0 EACH	INSTALL "ONE-WAY" SIGNAL UNIT OR PEDESTRIAN SIGNAL ON ANY OTHER STRUCTURE	\$		\$	

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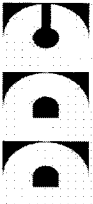
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			DOLLARS	CTS	
T-30013L (237)	5.0 EACH	FURNISH ADJUSTABLE 3 SECTION 1-WAY, DIE CAST ALUMINUM TRAFFIC SIGNALS 8" - W/LED LENS	\$ _____	_____	\$ _____
T-31150 (238)	1.0 EACH	FURNISH "1SA" ALUMINUM DIE CASTINGS AND ASSEMBLY FOR POST SIGNAL MOUNTING	\$ _____	_____	\$ _____
T-31210 (239)	8.0 EACH	h) "HUB" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ _____	_____	\$ _____
T-31340 (240)	4.0 EACH	f) "VB-P" ASSEMBLY *ASSEMBLY IS EQUAL TO ONE PAIR	\$ _____	_____	\$ _____

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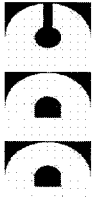
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			DOLLARS	CTS	DOLLARS	CTS
T-33000L (241)	1.0 EACH	FURNISH POLYCARBONATE INCANDESCENT PED SIGNAL W/LED LENS	\$		\$	
T-33001-L (242)	4.0 EACH	FURNISH POLYCARBONATE PEDESTRIAN SIGNAL (16 X 16) W/LED COUNT LENS (SPECIFICATION A-L)	\$		\$	
T-5.1 (243)	170.0 L.F.	FURNISH AND INSTALL 2" RIGID UNDERGROUND CONDUIT IN UNPAVED ROADWAY	\$		\$	
T-5.2 (244)	180.0 L.F.	FURNISH AND INSTALL 2" RIGID UNDERGROUND CONDUIT IN PAVED ROADWAY	\$		\$	

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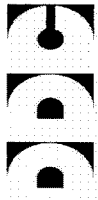


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			DOLLARS	CTS	DOLLARS	CTS
T-5.32 (245)	180.0 L.F.	RESTORING PERMANENT ROADWAY (INCLUDING SAWCUT)	\$ _____	_____	\$ _____	_____
T-6.1 (246)	100.0 L.F.	INSTALL CABLE (INCLUDES OVERHEAD)	\$ _____	_____	\$ _____	_____
T-6.10 (247)	1,000.0 L.F.	REMOVE CABLE (INCLUDES OVERHEAD)	\$ _____	_____	\$ _____	_____
T-6.11 (248)	150.0 L.F.	REMOVE OVERHEAD CABLE AND SUPPORTS	\$ _____	_____	\$ _____	_____

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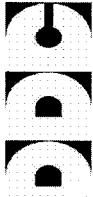


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			DOLLARS	CTS	
T-6.2 (249)	1,000.0 L.F.	INSTALL MULTIPLE CABLE (INCLUDES OVERHEAD)	\$		\$
T-6.7 (250)	200.0 L.F.	INSTALL MULTIPLE CABLE AND SUPPORTS ON STRUCTURE	\$		\$
T-6000B (251)	1,200.0 L.F.	FURNISH 2 c # 10B (BREAKDOWN = 2#10 WITH 3RD WIRE FOR GROUNDING).	\$		\$
T-60040 (252)	700.0 L.F.	c) 7 CONDUCTOR, 14 A.W.G.	\$		\$

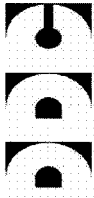
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			DOLLARS	CTS	DOLLARS	CTS
T-60190 (253)	1,400.0 L.F.	e) 13 CONDUCTOR, 14 A.W.G.	\$	—	\$	—
T-8.10 (254)	1.0 EACH	RELOCATE CONCRETE PYLON WITH POST	\$	—	\$	—
T-8.8 (255)	1.0 EACH	INSTALL CONCRETE PYLON	\$	—	\$	—
T-8.9 (256)	1.0 EACH	REMOVE CONCRETE PYLON	\$	—	\$	—



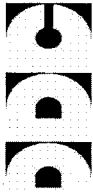
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			DOLLARS	CTS	DOLLARS	CTS
T-81000 (257)	1.0 EACH	FURNISH CONCRETE PYLON	\$		\$	
UTL-6.01.12 (258)	3.0 EACH	GAS MAIN CROSSING WATER MAIN 48" THRU 54" IN DIAMETER (S6.01) Unit price bid shall not be less than: \$ 810.00	\$		\$	
UTL-6.01.9 (259)	9.0 EACH	GAS MAIN CROSSING WATER MAIN UP TO 20" IN DIAMETER (S6.01) Unit price bid shall not be less than: \$ 485.00	\$		\$	
UTL-6.02 (260)	2.0 EACH	EXTRA EXCAVATION FOR THE INSTALLATION OF CATCH BASIN SEWER DRAIN PIPES WITH GAS INTERFERENCES (S6.02) Unit price bid shall not be less than: \$ 715.00	\$		\$	

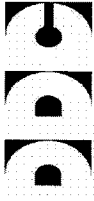
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Contract PIN 8502013HW0043C
Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)
			DOLLARS	CTS	
UTL-6.03 (261)	500.0 L.F.	REMOVAL OF ABANDONED GAS FACILITIES. ALL SIZES. (\$6.03) Unit price bid shall not be less than: \$ 15.00	\$ _____	_____	\$ _____
UTL-6.05 (262)	10.0 EACH	ADJUST HARDWARE TO GRADE BY RESETTING. (ROAD RECONSTRUCTION.) (\$6.05) Unit price bid shall not be less than: \$ 65.00	\$ _____	_____	\$ _____
UTL-6.06 (263)	250.0 C.Y.	SPECIAL CARE EXCAVATION AND BACKFILLING (\$6.06) Unit price bid shall not be less than: \$ 180.00	\$ _____	_____	\$ _____
UTL-6.07 (264)	100.0 C.Y.	TEST PITS FOR GAS FACILITIES (\$6.07) Unit price bid shall not be less than: \$ 100.00	\$ _____	_____	\$ _____



04/18/2013
11:35AM
BID PAGES

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

Contract PIN 8502013HW0043C
Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
UTL-6.09 (265)	450.0 C.Y.	TRENCH EXCAVATION AND BACKFILL FOR GAS MAINS AND SERVICES. GAS INSTALLED BY OTHERS. Unit price bid shall not be less than: \$ 190.00	\$		\$	
UTL-GCS-2WS (266)	1.0 F.S.	GAS INTERFERENCES AND ACCOMMODATIONS PRICE BID SHALL BE FOR THE FIXED SUM OF \$ 50,000.00	\$	50,000.00	\$	50,000.00



04/18/2013
11:35AM
BID PAGES

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

Contract PIN 8502013HW0043C
Project ID HWPLZ004M

COL. 1 ITEM NUMBER (SEQUENCE NO.)	COL. 2 ENGINEER'S ESTIMATE OF QUANTITIES	COL. 3 CLASSIFICATIONS	COL. 4 UNIT PRICES (IN FIGURES)		COL. 5 EXTENDED AMOUNTS (IN FIGURES)	
			DOLLARS	CTS	DOLLARS	CTS
6.39 A (267)	1.0 LUMP SUM	MOBILIZATION PRICE BID SHALL NOT EXCEED 4% OF THE ABOVE SUB-TOTAL PRICE.			\$	
SUB-TOTAL:					\$	
TOTAL BID PRICE:					\$	

PLEASE BE SURE A LEGIBLE BID IS ENTERED FOR EACH ITEM.

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

(NO TEXT ON THIS PAGE)

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

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

**PROJECT ID: HWPLZ004M
RECONSTRUCTION OF PERSHING SQUARE WEST**

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

Name of Bidder: _____

Date of Bid Opening: _____

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

Place of Business of Bidder: _____

Bidder's Telephone Number: _____ Fax Number: _____

Bidder's E-Mail Address: _____

Residence of Bidder (If Individual): _____

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

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

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

Organized under the laws of the State of _____

Name and Home Address of President: _____

Name and Home Address of Secretary: _____

Name and Home Address of Treasurer: _____

BID FORM

The above-named Bidder affirms and declares:

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

The bidder hereby affirms that it has paid all applicable City income, excise and other taxes for all years it has conducted business activities in New York City.
5. The bidder, as an individual, or as a member, partner, director or officer of the bidder, if the same be a firm, partnership or corporation, executes this document expressly warranting and representing that should this bid be accepted by the City and the Contract awarded to him, he and his subcontractors engaged in the performance: (1) will comply with the provisions of Section 6-108 of the Administrative Code of the City of New York and the non-discrimination provisions of Section 220a of the New York State Labor Law, as more expressly and in detail set forth in the Agreement; (2) will comply with Section 6-109 of the Administrative Code of the City of New York in relation to minimum wages and other stipulations as more expressly and in detail set forth in the Agreement; (3) have complied with the provisions of the aforesaid laws since their respective effective dates, and (4) will post notices to be furnished by the City, setting forth the requirements of the aforesaid laws in prominent and conspicuous places in each and every plant, factory, building and structure where employees engaged in the performance of the Contract can readily view it, and will continue to keep such notices posted until the supplies, materials and equipment, or work labor and services required to be furnished or rendered by the

Contractor have been finally accepted by the City. In the event of any breach or violation of the foregoing, the Contractor may be subject to damages, liquidated or otherwise, cancellation of the Contract and suspension as a bidder for a period of three years. (The words, "the bidder", "he", "his", and "him" where used herein shall mean the individual bidder, firm, partnership or corporation executing this bid).

6. Compliance Report

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

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

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

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

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

(NO TEXT ON THIS PAGE)

BID FORM

PROJECT ID: HWPLZ004M

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

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

\$ _____

BIDDER'S SIGNATURE AND AFFIDAVIT

WARNING!!! If M/WBE goals have been established for this Contract, you **MUST** complete and submit the Affirmations on the 2nd page of the Subcontractor Utilization Plan (or a pre-approved waiver) at the time you submit your bid. Failure to comply will result in the rejection of your bid.

Bidder: _____

By: _____
(Signature of Partner or corporate officer)

Attest:
(Corporate Seal)

Secretary of Corporate Bidder

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

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDER IS AN INDIVIDUAL

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:

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

(Signature of the person who signed the Bid)

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

Notary Public

AFFIDAVIT WHERE BIDDER IS A PARTNERSHIP

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:

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

(Signature of Partner who signed the Bid)

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

Notary Public

AFFIDAVIT WHERE BIDDER IS A CORPORATION

STATE OF NEW YORK, COUNTY OF _____ ss:

_____ being duly sworn says:

I am the _____ of the above named corporation whose name is subscribed to and which executed the foregoing bid. I reside at _____
I have knowledge of the several matters therein stated, and they are in all respects true.

(Signature of Corporate Officer who signed the Bid)

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

Notary Public

AFFIRMATION

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

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

Full Name of Bidder: _____

Address: _____

City _____ State _____ Zip Code _____

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

A - Individual or Sole Proprietorship*
SOCIAL SECURITY NUMBER

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

C- Corporation
EMPLOYER IDENTIFICATION NUMBER

By: _____
Signature

Title: _____

If a corporation, place seal here

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

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

(NO TEXT ON THIS PAGE)

BID BOND 1
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS. That we, _____

hereinafter referred to as the "Principal", and _____

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

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

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

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

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

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

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

BID BOND 2

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

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

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

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

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

(Seal)

Principal (L.S.)

By: _____

(Seal)

Surety

By: _____

BID BOND 3

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

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

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

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

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

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

Notary Public

AFFIX ACKNOWLEDGMENTS AND JUSTIFICATION OF SURETIES

(NO TEXT ON THIS PAGE)

M/WBE PROGRAM

SUBCONTRACTOR UTILIZATION PLAN – SCHEDULE B

Subcontractor Utilization Plan (Schedule B): The Subcontractor Utilization Plan (Schedule B) for this Contract is set forth on the following pages of this Bid Booklet. The Subcontractor 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 a Subcontractor Utilization Plan (Part II) with its bid.

Contract Provisions: Contract provisions regarding the participation of MWBE firms are set forth in Article 77 of the Contract. The bidder is advised to review these contract provisions.

Waiver: The bidder may seek a full or partial pre-award waiver of the Target Subcontracting Percentage in accordance with Article 77 of the Contract (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 Target Subcontracting Percentage is set forth in the Subcontractor Utilization Plan (Part III).

Rejection of the Bid: The bidder must complete the Subcontractor Utilization Plan (Part II) set forth on the following pages. Subcontractor Utilization Plans which do not include the required affirmations will be deemed to be non-responsive, unless a full waiver of the Target Subcontracting Percentage is granted (Subcontractor Utilization Plan, Part III). In the event that the City determines that the bidder has submitted a Subcontractor Utilization Plan where the required affirmations are completed but other aspects of the Plan are not complete, or contain a copy or computation error that is at odds with the affirmation, 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 plan 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) days from the date of mailing or upon delivery, if delivered.

Impact on LBE Requirements: If 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.



THE CITY OF NEW YORK

SCHEDULE B - Subcontractor Utilization Plan - Part I: Agency's Target

This page to be completed by contracting agency

Contract Overview

Pin # 8502013HW0043C FMS Project ID#: HWPLZ004M
 Project Title RECONSTRUCTION OF PERSHING SQUARE WEST
 Contracting Agency Department of Design and Construction
 Agency Address 30-30 Thomson Ave City Long Island City State NY Zip Code 11101
 Contact Person Jessica Lavidès Title MWBE Liaison & Compliance Analyst
 Telephone # (718) 391- 1065 Email LavidèsJe@ddc.nyc.gov

Project Description *(attach additional pages if necessary)*

RECONSTRUCTION OF PERSHING SQUARE WEST
PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET
INCLUDING SEWER, WATER MAIN, STREETSCAPING,
STREET LIGHTING, AND TRAFFIC SIGNAL WORK
 Together With All Work Incidental Thereto
BOROUGH OF MANHATTAN
CITY OF NEW YORK

(1) ✓ **Target Subcontracting Percentage**
 Percentage of total contract dollar value that agency estimates will be awarded to subcontractors in amounts under \$1 million for construction and professional services. _____ 5 %

Subcontractor Participation Goals*
Complete and enter total for each Construction or Professional Services, or both (if applicable)

Group	Construction	Professional Services
Black American	UNSPECIFIED %	0 %
Hispanic American	UNSPECIFIED %	0 %
Asian American	UNSPECIFIED %	NO GOAL %
Caucasian Female	NO GOAL %	0 %
Total Participation Goals	(2) 50 %	(3) 0 %

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

SCHEDULE B - Subcontractor Utilization Plan – Part II: Bidder/Proposer Subcontracting Plan

This page and the next (Part II herein) are to be completed by the bidder/proposer. **AFFIRMATIONS; Bidder/proposer must check the applicable boxes below, affirming compliance with M/WBE requirements.**

Bidder/proposer AFFIRMS or DOES NOT AFFIRM [statement below]

It is a material term of the contract to be awarded that, with respect to the total amount of the contract to be awarded, bidder/proposer will award one or more subcontracts for amounts under one million dollars, sufficient to meet or exceed the Target Subcontracting Percentage (as set forth in Part I) unless it obtains a full or partial waiver thereof, and it will award subcontracts sufficient to meet or exceed the Total Participation Goals (as set forth in Part I) unless such goals are modified by the Agency.

Bidder/proposer AFFIRMS that it intends to meet or exceed the Target Subcontracting Percentage (as set forth in Part I); or

AFFIRMS that it has obtained a full/partial pre-award waiver of the Target Subcontracting Percentage (as set forth in Part I) and intends to award the modified Target Subcontracting Percentage, if any; or

DOES NOT AFFIRM

Section I: Prime Contractor Contact Information

Tax ID # _____ FMS Vendor ID # _____

Business Name _____ Contact Person _____

Address _____

Telephone # _____ Email _____

Section II: General Contract Information

1. Define the industry in which work is to be performed.

- **Construction** includes all contracts for the construction, rehabilitation, and/or renovation of physical structures. This category does include CM Build as well as other construction related services such as: demolition, asbestos and lead abatement, and painting services, carpentry services, carpet installation and removal, where related to new construction and not maintenance. This category does not include standard services which may be associated with construction projects but which do not constitute construction, such as trucking, site protection, site security, site surveying, soil testing, extermination, and maintenance/operations.
- **Professional Services** are a class of services that typically require the provider to have some specialized field or advanced degree. Services of this type include: legal, management consulting, information technology, accounting, auditing, actuarial, advertising, health services, pure construction management, environmental analysis, scientific testing, architecture and engineering, and traffic studies, and similar services.

a. Type of work on Prime Contract (Check one):

b. Type of work on Subcontract (Check all that apply):

Construction Professional Services Construction Professional Services Other

2. What is the expected percentage of the total contract dollar value that you expect to award to all subcontracts? _____ %

3. Will you award subcontract(s) in amounts below \$ 1 million for construction and/or professional services contracts within the first 12 months of the notice to proceed on the contract? Yes No

Section III: Subcontractor Utilization Summary

IMPORTANT: If you do not anticipate that you will subcontract at the target level the agency has specified, because you will perform more of the work yourself, you must seek a waiver of the Target Subcontracting Percentage by completing p.9).

Step 1:

Calculate the percentage (of your total bid) that will go towards subcontracts under \$ 1M for construction and/or professional services	Subcontracts under \$1M (4) (construction/professional services)	Total Bid/Proposal Value	Calculated Target Subcontracting Percentage
	\$ _____	÷ \$ _____	X 100 = _____ %

- **Subcontracts under \$1M (construction/professional services):** Enter the value you expect to award to subcontractors in dollars for amounts under \$1 million for construction and/or professional services. This value defines the amount that participation goals apply to, and will be entered into the first line of Step 2.
- **Total Bid/Proposal Value:** Provide the dollar amount of the bid/proposal.
- **Calculated Target Subcontracting Percentage:** The percentage of the total contract dollar value that will be awarded to one or more subcontractors for amounts under \$1 million for construction and/or professional services. **This percentage must equal or exceed the percentage listed by the agency on page 6, at line (1).**

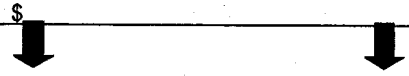
NOTE: The "Calculated Target Subcontracting Percentage" MUST equal or exceed the Target Subcontracting Percentage listed by the agency on Page 6, Line (1).

SCHEDULE B - Subcontractor Utilization Plan – Part II: Bidder/Proposer Subcontracting Plan – cont.

Step 2:
Calculate value of subcontractor participation goals

Subcontracts under \$1M
(construction/professional services)

a. Copy value from Step 1, line (4) – the total value of all expected subcontracts Under \$1M for construction and/or professional services



- b. • From line a. above, allocate the dollar value of "Subcontracts under \$1M" by Construction and Professional Services.
- If all subcontracts under \$1M are in one industry, enter "0" for the industry with no subcontracts.
- Amounts listed on these lines should add up to the value from line a.

Construction **Professional Services**

Subcontracts under \$1M by industry

\$ _____ \$ _____

- For Construction enter percentage from line (2) from Page 6.
- For Professional Services enter percentage from line (3) from Page 6.

c. • **Total Participation Goals Percentages must be copied from Part I, lines (2) and (3).**

Total Participation Goals x _____ % x _____ %

d. **Value of Total Participation Goals** \$ _____ \$ _____

Step 3: *Enter brief description of type(s) of subcontracts in amounts under \$1M anticipated, by Type of work, not by name of subcontractor*

✓ **Subcontracts in Amounts Under \$1 M Scope of Work – Construction**

Enter brief description of type(s) of subcontracts in amounts under \$1M anticipated, by Type of work, not by name of subcontractor

✓ **Subcontracts in Amounts Under \$1 M Scope of Work – Professional Services**

Section IV: Vendor Certification and Required Affirmations

I hereby 1) acknowledge my understanding of the M/WBE requirements as set forth herein and the pertinent provisions of Local Law 129 of 2005, and the rules promulgated thereunder; 2) affirm that the information supplied in support of this subcontractor utilization plan is true and correct; 3) agree, if awarded this Contract, to comply with the M/WBE requirements of this Contract and the pertinent provisions of Local Law 129 of 2005, 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 subcontract(s) sufficient to meet the Target Subcontracting Percentage, unless a waiver is obtained, and the Vendor will award subcontract(s) sufficient to meet the Total Participation Goals unless such goals are modified by the Agency; and 5) agree and affirm, if awarded this contract the Vendor intends to make all reasonable, good faith efforts to meet the Target Subcontracting Percentage, or If the Vendor has obtained a waiver, the Vendor intends to meet the modified Target Subcontracting Percentage, if any, and the Vendor intends to solicit and obtain the participation of M/WBEs so as to meet the Total Participation Goals unless modified by the Agency.

Signature _____ Date _____
Print Name _____ Title _____

SCHEDULE B - PART III - REQUEST FOR WAIVER OF TARGET SUBCONTRACTING PERCENTAGE

Contract Overview

Tax ID # _____ FMS Vendor ID # _____
 Business Name _____
 Contact Name _____ Telephone # _____ Email _____
 Type of Procurement Competitive Sealed Bids Other Bid/Response Due Date _____
 PIN # (for this procurement) _____ Type of work on Prime Contract _____ Type of work on Subcontract (Check all that apply):
 (Check one):
 Construction Construction Other
 Professional Services Professional Services

SUBCONTRACTING as described in bid/solicitation documents (Copy this % figure from the solicitation)
 _____ % of the total contract value anticipated by the agency to be subcontracted for construction/professional services subcontracts valued below \$1 million (each)

ACTUAL SUBCONTRACTING as anticipated by vendor seeking waiver
 _____ % of the total contract value anticipated in good faith by the bidder/proposer to be subcontracted for construction/professional services subcontracts valued below \$1 million (each)

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

- Vendor does not subcontract construction/professional services, and has the capacity and good faith intention to perform all such work itself.
- Vendor subcontracts some of this type of work but at lower % than bid/solicitation describes, and has the capacity and good faith intention to do so on this contract.
- Other _____

References

List 3 most recent contracts/subcontracts performed for NYC agencies (if any)

CONTRACT NO. _____	AGENCY _____	DATE COMPLETED _____
CONTRACT NO. _____	AGENCY _____	DATE COMPLETED _____
CONTRACT NO. _____	AGENCY _____	DATE COMPLETED _____

List 3 most recent contracts/subcontracts performed for other agencies/entities (complete ONLY if vendor has performed fewer than 3 NYC contracts)

TYPE OF WORK. _____	AGENCY/ENTITY _____	DATE COMPLETED _____
Manager at agency/entity that hired vendor (Name/Phone No.) _____		
TYPE OF WORK. _____	AGENCY/ENTITY _____	DATE COMPLETED _____
Manager at agency/entity that hired vendor (Name/Phone No.) _____		
TYPE OF WORK. _____	AGENCY/ENTITY _____	DATE COMPLETED _____
Manager at agency/entity that hired vendor (Name/Phone No.) _____		

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: _____

(NO TEXT ON THIS PAGE)

APPRENTICESHIP PROGRAM REQUIREMENTS

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

YES NO

(1) Apprenticeship Program Requirements

Notice to Bidders: Please be advised that, pursuant to the authority granted to the City under Labor Law Section 816-b, the Department of Design and Construction hereby requires that the contractor awarded a contract as a result of this Invitation for Bids, and any of its subcontractors with subcontracts worth one million dollars or over, have, prior to entering into such contract or subcontract, apprenticeship agreements appropriate for the type and scope of work to be performed that have been registered with, and approved by, the New York State Commissioner of Labor. In addition, the contractor and its subcontractors will be required to show that such apprenticeship programs have three years of current, successful experience in providing career opportunities.

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

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

(2) Apprenticeship Program Questionnaire

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

APPRENTICESHIP PROGRAM QUESTIONNAIRE

PROJECT ID: HWPLZ004M

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

Name of Bidder: _____

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.

Bidder: _____

By: _____ Title: _____
(Signature of Partner or Corporate Officer)

Date: _____

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: _____

DDC Project Number: _____

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

_____ Company has previously worked for DDC

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.

Project ID. _____

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

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

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

4. OSHA Information:

_____ Contractor has received a willful violation issued by OSHA or New York City Department of Buildings (NYCDOB) within the last three years.

_____ 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.

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

Project ID. _____

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

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)

_____ Contractor previously audited by the DDC Office of Site Safety.

DDC Project Number(s): _____

_____ Accident on previous DDC Project(s).

_____ 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].

Date: _____

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

Title: _____

(NO TEXT ON THIS PAGE)

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 17 through 19 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)

VENDEX COMPLIANCE

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

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

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

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

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

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

Date of Submission: _____

By: _____
(Signature of Partner or corporate officer)

Print Name: _____

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

By: _____
(Signature of Partner or corporate officer)

Print Name: _____

(NO TEXT ON THIS PAGE)

Certificate of No Change Form



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

I, _____, being duly sworn, state that I have read
Enter Your Name

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

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

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

Vendor Questionnaire *This section is required.*

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

Name of Submitting Entity: _____

Vendor's Address: _____

Vendor's EIN or TIN: _____ Requesting Agency: _____

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

Signature date on the last full vendor questionnaire signed for the submitting vendor: _____

Signature date on change submission for the submitting vendor: _____

Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.



Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on submission of change
1		
2		
3		
4		
5		
6		

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

Certification *This section is required.*

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

Certified By:

Name (Print)

Title

Name of Submitting Entity

Signature

Date

Notarized By:

Notary Public

County License Issued

License Number

Sworn to before me on: _____
Date

Certificate of No Change Form

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

I, _____, being duly sworn, state that I have read
Enter Your Name

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

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

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

Vendor Questionnaire *This section is required.*

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

Name of Submitting Entity: _____

Vendor's Address: _____

Vendor's EIN or TIN: _____ Requesting Agency: _____

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

Signature date on the last full vendor questionnaire signed for the submitting vendor: _____

Signature date on change submission for the submitting vendor: _____

Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.



Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on submission of change
1		
2		
3		
4		
5		
6		

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

Certification *This section is required.*

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

Certified By:

Name (Print)

Title

Name of Submitting Entity

Signature

Date

Notarized By:

Notary Public

County License Issued

License Number

Sworn to before me on: _____
Date

IRAN DIVESTMENT ACT COMPLIANCE RIDER

FOR NEW YORK CITY CONTRACTORS

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

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

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

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

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

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

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

[Please Check One]

BIDDER'S CERTIFICATION

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

Dated: _____, New York
_____, 20__

SIGNATURE

PRINTED NAME

TITLE

Sworn to before me this
____ day of _____, 20__

Notary Public

Dated:

**THE CITY OF NEW YORK
DEPARTMENT OF SMALL BUSINESS SERVICES
DIVISION OF LABOR SERVICES
CONTRACT COMPLIANCE UNIT
110 WILLIAMS STREET
NEW YORK, NEW YORK 10038
PHONE: (212) 513-6323
FAX: (212) 618-8879**

CONSTRUCTION

EMPLOYMENT

REPORT

(NO TEXT ON THIS PAGE)

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

CONSTRUCTION EMPLOYMENT REPORT
 INSTRUCTIONS

WHO MUST FILE A CONSTRUCTION EMPLOYMENT REPORT

A Construction Employment Report (ER) must be filed if you meet the following conditions:

CONTRACT FUNDING SOURCE	CONTRACTOR	CONTRACT VALUE	SUBMISSION REQUIREMENT
Federally assisted	Prime and subcontractors	\$10,000 or greater	Construction Employment Report
City and state funded	Prime contractor	\$1,000,000 or greater	
	Subcontractor	\$750,000 or greater	
		Less than \$750,000	Less than \$750,000 Waiver

Prime Contractor:

- A general contractor or construction manager selected to perform work on a construction project funded (in whole or in part) by the federal government with a proposed contract value of \$10,000 or more.
- A general contractor or construction manager selected to perform work on a construction project funded or assisted by the City of New York with a proposed contract value of \$1,000,000 or more.

Subcontractor:

- A subcontractor selected to perform work on a construction project funded (in whole or in part) by the federal government with a proposed contract value of \$10,000 or more.
- A subcontractor selected to perform work on a construction project funded or assisted by the City of New York with a proposed contract value of \$750,000 or more.
- A subcontractor selected to perform work on a construction project funded or assisted by the City of New York with a proposed contract value of less than \$750,000 must submit a "Less than \$750,000" waiver.

WHERE TO FILE

Employment Reports must be filed with the City agency awarding the contract. If you are a contractor or subcontractor who will be working for a private developer in receipt of funding or assistance from the City, the ER must be filed with the City agency with jurisdiction over the developer's project.

DLS REVIEW PROCESS

In accordance with Executive Order 50 (EO 50), upon receipt by DLS of a completed ER, DLS conducts a review of the contractor's current employment policies, practices and procedures, as well as perform a statistical analysis of the contractor's workforce, if necessary. The process is as follows:

1. Within five (5) business days, DLS will review the ER for completeness and accuracy. If any information is omitted

or incorrect, or if necessary documents are not submitted, the submission shall be deemed incomplete and DLS will inform the contractor. The substantive compliance review does not commence until the submission is complete. **An incomplete submission will delay the review process and may preclude or interrupt the contract approval.**

2. If the ER submission is complete, the compliance review will proceed, resulting in one of the following:

Certificate of Approval

The contractor is found to be in compliance with all applicable laws and regulations. The approval is valid for 36 months.

Continued Approval Certificate

The contractor has been issued a Certificate of Approval in the previous 36 months which is good for the applicable contract.

Conditional Certificate of Compliance

The contractor is required to take corrective actions in order to be in compliance with EO 50. The contractor must meet the conditions within one month of the issue of the Conditional Certificate.

Determination of Nonperformance

The contractor has failed to take the required corrective actions stipulated in the Conditional Certificate. A determination of nonperformance may prevent a contractor from receiving an award of a contract.

HOW TO COMPLETE THE EMPLOYMENT REPORT

Contents

General Information

Part I: Contractor/Subcontractor Information

Part II: Employment Policies and Practices

Part III: Contract Bid Information and Projected and Current Workforce Forms

Signature Page

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

- Questions 4 – 8: Please provide the required contact information for your company. All contracts must have a designated Equal Employment Officer.
- Question 9: If you are a subcontractor, you must state the name of the contractor for whom you are providing the construction services.
- Question 10: Please provide the number of permanent employees in your company.
- Question 11a-h: The Project Identification Number (PIN) and the Contract Registration ID Number (CT#) can be obtained from the City agency. Provide a description of the trade work you will perform on this project and the address where the work will be performed. Subcontractors can obtain this information from the contract they have with the prime contractor.
- Questions 12 – 14: If your company has received a valid Certificate of Approval within the past 36 months, been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP), or if your company has submitted an ER for a different contract for which you have not yet received a compliance certificate, then you only need to complete and submit the following:
- General Information section
 - Part I - Contractor/Subcontractor Information
 - Form B - Projected Workforce
 - Signature Page

If your company is currently waiting for an approval on another contract previously submitted, be certain to identify the date on which you submitted the completed Employment Report, the name of

the City contracting agency with which the contract was made, and the name and telephone number of the person to whom the Employment Report was submitted.

If your company was issued a Conditional Certificate of Approval, all required corrective actions must have been taken or DLS will not issue a Continued Certificate.

- Question 15: If the company was audited by the OFCCP, also provide the following:
- Identify the reviewing OFCCP office by its name and address
 - If an unconditional certificate of compliance was issued by the OFCCP, attach a copy of the certificate in lieu of completing Parts II and III;
 - Include copies of all corrective actions and documentation of OFCCP's performance; and
 - Provide a copy of all stated OFCCP findings.
- Question 16: Please provide a copy of any Collective Bargaining Agreement(s) which is negotiated through an employer trade association on behalf of your organization or any of its affiliates.

PART II: EMPLOYMENT POLICIES AND PRACTICES

Remember to label all documents with the question number for which they are submitted.

Questions 17a – j: You must respond to the questions as to whether or not your firm has documents reflecting written policies, benefits and procedures. If so, then you must identify by name each document in which the policy(ies), procedure(s) and benefit(s) is located and submit copies of all of the document(s). If your firm follows unwritten practices or procedures, include an explanation of how they operate. Please submit the most current document(s), including all applicable amendments. Label each document and/or unwritten practice according to the question to which it corresponds (e.g. 18a, 18b, etc.)

Questions 18a – h: Inquires about the manner/methods by which you comply with the requirements of the Immigration Reform and Control Act of 1986 (IRCA).

Question 19: Inquires into where and how I-9 forms are maintained and stored.

Questions 20a – e: Inquires into whether or not there is a requirement that an applicant or employee be subjected to a medical examination at any given time. Copies of the medical information questionnaire and instructions must be submitted with the Employment Report.

Question 21: Indicate the existence and location of all statements of your firm's Equal Employment Opportunity policy and attach a copy of each statement.

Question 22: Submit any current Affirmative Action Plan(s) created pursuant to Executive Order 11246.

Question 23: If your firm or collective bargaining agreement has an internal grievance procedure, indicate this and submit a copy of the policy and procedure. If unwritten, explain its nature and operation. Explain how your firm's procedure addresses EEO complaints.

Question 24: If your employees have used the procedure in the last three (3) years, please submit an explanation in the format indicated below:

1. Number of complaint(s)	2. Nature of the complaint(s)	3. Position(s) of the complainant(s)	4. Was an investigation conducted? Y/N	5. Current status of the disposition
---------------------------	-------------------------------	--------------------------------------	---	--------------------------------------

Question 25: Indicate whether in the past three (3) years complaints have been filed with a court of law or administrative agency, naming your company as a defendant (or respondent) in a complaint alleging violation of any anti-discrimination or affirmative action laws. If yes, develop and submit a log to show, for each administrative/and or judicial action filed, the following information:

1. Name(s) of complainant(s)	2. Administrative agency or court in which action was filed	3. Nature of the complaint(s)	4. Current status	5. If not pending, the complaint's disposition
------------------------------	---	-------------------------------	-------------------	--

Question 26: Identify each job for which a physical qualification exists. Identify and explain the physical qualification(s) for each stated job. Submit job descriptions for each job and the reasons for the qualifications.

Question 27: Identify each job for which there exists any qualification related to age, race, color, national origin, sex, creed, disability, marital status, sexual orientation or citizenship status. Identify and explain the specific related qualification for each job stated. Submit job descriptions for each job and the reasons for the qualifications.

PART III: CONTRACT BID INFORMATION AND PROJECTED AND CURRENT WORKFORCE FORMS

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

Your projections for the utilization of subcontractors on the proposed contract are to be provided in this section. A chart has been provided for the identification of subcontractors. Information is to be provided to the extent known at the time the ER is filed for review by DLS. If the subcontractor's name is unknown, then write "unknown". Under "ownership", enter the appropriate race/ethnic and gender code. If the contract is federally funded or assisted and the subcontractor is being utilized in accordance with applicable federal requirements with respect to Minority Business Enterprise or Woman Business Enterprise requirements, enter the appropriate code. This will also apply to state funded contracts with similar requirements for minority and female owned businesses.

FORM B: PROJECTED WORKFORCE FOR WORK TO BE PERFORMED ON THIS PROJECT

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

FORM C: CURRENT WORKFORCE FOR WORK TO BE PERFORMED ON THIS PROJECT

For each trade *currently* engaged by your company for all work performed in NYC, enter the current workforce for Males and Females by trade classification in the charts provided.

SIGNATURE PAGE

The signatory of this Employment Report and all other documents submitted to DLS must be an official authorized to enter into a binding legal agreement. The signature page must be completed in its entirety and notarized. Only original signatures will be accepted.

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

1. Your contractual relationship in this contract is: Prime contractor Subcontractor
- 1a. Are M/WBE goals attached to this project? Yes No
2. Please check one of the following if your firm would like information on how to certify with the City of New York as a:
 Minority Owned Business Enterprise Locally based Business Enterprise
 Women Owned Business Enterprise Emerging Business Enterprise
- 2a. If you are certified as an **MBE, WBE, or LBE**, what city/state agency are you certified with?
_____ Are you DBE certified? Yes No
3. Please indicate if you would like assistance from SBS in identifying certified M/WBEs for contracting opportunities: Yes No
4. Is this project subject to a project labor agreement? Yes No

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

5. _____
Employer Identification Number or Federal Tax I.D./ _____ Email Address
6. _____
Company Name
7. _____
Company Address and Zip Code
8. _____
Chief Operating Officer Telephone Number
9. _____
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #7, write "same")
10. _____
Name of Prime Contractor and Contact Person
(If same as Item #5, write "same")
11. Number of employees in your company: _____

12. Contract information:

- (a) _____
Contracting Agency (City Agency)
- (b) _____
Contract Amount
- (d) _____
Procurement Identification Number (PIN)
- (e) _____
Contract Registration Number (CT#)
- (f) _____
Projected Commencement Date
- (g) _____
Projected Completion Date

(h) Description and location of proposed contract:

13. 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.

14. 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.

15. 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: _____

16. 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.

17. 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

18. 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?

19. 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 ___ |

20. Explain where and how completed I-9 Forms, with their supportive documentation, are maintained and made accessible.

21. 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.

22. 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.

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

___ Minorities and Women

___ Individuals with handicaps

___ Other. Please specify _____

24. 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.

25. 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.

26. 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.

27. 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).

28. Are there any jobs for which there are age, race, color, national origin, sex, creed, disability, marital status, sexual orientation, or citizenship qualifications? Yes___ No___

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

SIGNATURE PAGE

I, (print name of authorized official signing) _____ hereby certify that the information submitted herewith is true and complete to the best of my knowledge and belief and submitted with the understanding that compliance with New York City's equal employment requirements, as contained in Chapter 56 of the City Charter, Executive Order No. 50 (1980), as amended, and the implementing Rules and Regulations, is a contractual obligation.

I also agree on behalf of the company to submit a certified copy of payroll records to the Division of Labor Services on a monthly basis.

Contractor's Name

Name of person who prepared this Employment Report Title

Name of official authorized to sign on behalf of the contractor Title

Telephone Number

Signature of authorized official Date

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

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

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

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

Only original signatures accepted.

Sworn to before me this _____ day of _____ 20 _____

Notary Public Authorized Signature Date

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

1. Your contractual relationship in this contract is: Prime contractor ___ Subcontractor X
- 1a. Are M/WBE goals attached to this project? Yes ___ No ___
2. Please check one of the following if your firm would like information on how to certify with the City of New York as a:
___ Minority Owned Business Enterprise ___ Locally based Business Enterprise
___ Women Owned Business Enterprise ___ Emerging Business Enterprise
- 2a. If you are certified as an **MBE, WBE, or LBE**, what city/state agency are you certified with?
_____ Are you DBE certified? Yes ___ No ___
3. Please indicate if you would like assistance from SBS in identifying certified M/WBEs for contracting opportunities: Yes ___ No ___
4. Is this project subject to a project labor agreement? Yes ___ No ___

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

5. _____
Employer Identification Number or Federal Tax I.D./ _____ Email Address
6. _____
Company Name
7. _____
Company Address and Zip Code
8. _____
Chief Operating Officer Telephone Number
9. _____
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #7, write "same")
10. _____
Name of Prime Contractor and Contact Person
(If same as Item #5, write "same")
11. Number of employees in your company: _____

12. Contract information:

- (a) _____
Contracting Agency (City Agency)
- (b) _____
Contract Amount
- (d) _____
Procurement Identification Number (PIN)
- (e) _____
Contract Registration Number (CT#)
- (f) _____
Projected Commencement Date
- (g) _____
Projected Completion Date

(h) Description and location of proposed contract:

13. 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.

14. 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.

15. 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: _____

16. 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.

17. 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

18. 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?

19. 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___ |

20. Explain where and how completed I-9 Forms, with their supportive documentation, are maintained and made accessible.

21. 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.

22. 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.

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

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

24. 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.

25. 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.

26. 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.

27. 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).

28. Are there any jobs for which there are age, race, color, national origin, sex, creed, disability, marital status, sexual orientation, or citizenship qualifications? Yes___ No___

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

SIGNATURE PAGE

I, (print name of authorized official signing) _____ hereby certify that the information submitted herewith is true and complete to the best of my knowledge and belief and submitted with the understanding that compliance with New York City's equal employment requirements, as contained in Chapter 56 of the City Charter, Executive Order No. 50 (1980), as amended, and the implementing Rules and Regulations, is a contractual obligation.

I also agree on behalf of the company to submit a certified copy of payroll records to the Division of Labor Services on a monthly basis.

Contractor's Name

Name of person who prepared this Employment Report Title

Name of official authorized to sign on behalf of the contractor Title

Telephone Number

Signature of authorized official Date

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

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

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

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

Only original signatures accepted.

Sworn to before me this _____ day of _____ 20 _____

Notary Public Authorized Signature Date

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

Date _____ File Number _____

LESS THAN \$750,000 SUBCONTRACT CERTIFICATE

Are you currently certified as one of the following? Please check yes or no:

MBE Yes ___ No ___ WBE Yes ___ No ___ LBE Yes ___ No ___ DBE Yes ___ No ___

If you are certified as an MBE, WBE, LBE or DBE, what city/state agency are you certified with?

Please check one of the following if your firm would like information on how to certify with the City of New York as a:

___ Minority Owned Business Enterprise

___ Locally based Business Enterprise

___ Women Owned Business Enterprise

Company Name _____ Employer Identification Number or Federal Tax I.D. _____

Company Address and Zip Code _____

Contact Person (First Name, Last Name) _____ Telephone Number _____

Fax Number _____ E-mail Address _____

Description and location of proposed subcontract: _____

Procurement Identification Number (PIN)
(City contracts only)

Contract Registration Number (CT#)
(City contracts only)

Block and Lot Number
(ICIP projects only)

ICIP Application Number
(ICIP projects only)

I, (print name of authorized official signing) _____ hereby certify that I am authorized by the above-named subcontractor to certify that said subcontractor's proposed contract with the above named owner or City agency is less than \$750,000. This affirmation is made in accordance with NYC Charter Chapter 56, Executive Order No. 50 (1980) and the implementing Rules.

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

Signature of authorized official _____ Date _____

Only original signatures accepted.

Sworn to before me this _____ day of _____ 20 _____

Notary Public _____ Authorized Signature _____ Date _____

(NO TEXT ON THIS PAGE)

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

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

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

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

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

OWNERSHIP CODES

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

FORM B: PROJECTED WORKFORCE

TRADE CLASSIFICATION CODES

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

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

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

Total (Col. #1-10):

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

Total Female
(Col. #6 - 10):

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

FORM B: PROJECTED WORKFORCE

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

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

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

MALES

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

FEMALES

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

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

FORM C: CURRENT WORKFORCE

TRADE CLASSIFICATION CODES

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

Total (Col. #1-10):

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

Total Female
(Col. #6 - 10):

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

FORM C: CURRENT WORKFORCE

Trade: _____

Union Affiliation, if applicable

Total (Col. #1-10): _____

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

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

MALES

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

FEMALES

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

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

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 1 OF 3

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET

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

Together With All Work Incidental Thereto

BOROUGH OF MANHATTAN
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

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: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

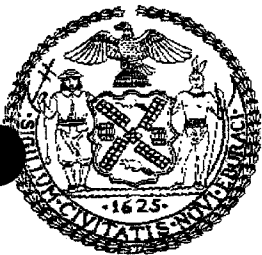
**INCLUDING SEWER, WATER MAIN, STREETSCAPING,
STREET LIGHTING, AND TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
URS CORPORATION

FEBRUARY 28, 2013



3-036





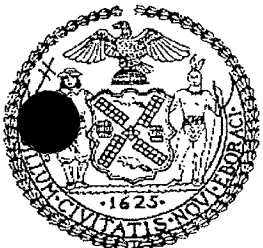
**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF INFRASTRUCTURE**

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 TRANSPORTATION
PREPARED BY
IN-HOUSE DESIGN

MARCH 3, 2010



Notice to Bidders:

In 2013 the City will be implementing a new web based subcontractor reporting system. Once this subcontractor reporting system is implemented, and Contractor receives notice of its implementation, Contractor will be required to list in the system all of the subcontractors that it knows it will use or is already using in the performance of this contract. For each subcontractor listed, Contractor will be required to provide the following information: maximum contract value, description of subcontractor work, start and end date of the subcontract and identification of the subcontractor's industry. Identification of subcontractors in the system along with the required information will be required in order to obtain subcontractor approval under [section 3.02 of Appendix A][Article 17 of the Standard Construction Contract] and PPB Rule § 4-13 for all subcontractors that have not been approved as of the implementation date. 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...

When the subcontractor reporting system is implemented, Contractor will receive a written notice from the City which will contain the information the Contractor will need to list its subcontractors and report payments. Contractor will not be required to comply with the requirements set forth herein until such notice is issued. Contractor will have 30 days from the date of the notice to list its current subcontractors for which it has already received Agency approval, if any. Thereafter, for those subcontractors that have not yet been approved by the Agency, subcontractors will have to be listed in the system in order to obtain the required Agency approval.

Failure of the Contractor to list a subcontractor and/or to report subcontractor payments in a timely fashion may result in the Agency declaring the Contractor in default of the Contract and may 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. For construction contracts, the provisions of Article 15 of the Standard Construction Contract shall govern the issue of liquidated damages.

Contractor hereby agrees to these provisions and acknowledges that they will become effective on the date set forth in the notice.

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NOTICE TO BIDDERS, PROPOSERS, CONTRACTORS, AND RENEWAL CONTRACTORS

This contract includes a provision concerning the protection of employees for whistleblowing activity, pursuant to New York City Local Law Nos. 30-2012 and 33-2012, effective October 18, 2012 and September 18, 2012, respectively. The provisions apply to contracts with a value in excess of \$100,000.

Local Law No. 33-2012, the Whistleblower Protection Expansion Act ("WPEA"), prohibits a contractor or its subcontractor from taking an adverse personnel action against an employee or officer for whistleblower activity in connection with a City contract; requires that certain City contracts include a provision to that effect; and provides that a contractor or subcontractor may be subject to penalties and injunctive relief if a court finds that it retaliated in violation of the WPEA. The WPEA is codified at Section 12-113 of the New York City Administrative Code.

Local Law No. 30-2012 requires a contractor to prominently post information explaining how its employees can report allegations of fraud, false claims, criminality, or corruption in connection with a City contract to City officials and the rights and remedies afforded to employees for whistleblowing activity. Local Law No. 30-2012 is codified at Section 6-132 of the New York City Administrative Code.

WHISTLEBLOWER PROTECTION EXPANSION ACT RIDER

1. In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the New York City Administrative Code, respectively,
 - (a) 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 (i) the Commissioner of the Department of Investigation, (ii) a member of the New York City Council, the Public Advocate, or the Comptroller, or (iii) the City Chief Procurement Officer, ACCO, Agency head, or Commissioner.
 - (b) If any of Contractor's officers or employees believes that he or she has been the subject of an adverse personnel action in violation of subparagraph (a) of paragraph 1 of this rider, he or she shall be entitled to bring a cause of action against Contractor to recover all relief necessary to make him or her whole. Such relief may include but is not limited to: (i) an injunction to restrain continued retaliation, (ii) reinstatement to the position such employee would have had but for the retaliation or to an equivalent position, (iii) reinstatement of full fringe benefits and seniority rights, (iv) payment of two times back pay, plus interest, and (v) compensation for any special damages sustained as a result of the retaliation, including litigation costs and reasonable attorney's fees.
 - (c) 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:
 - (i) 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
 - (ii) the rights and remedies afforded to its employees under New York City 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.
 - (d) For the purposes of this rider, "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.
 - (e) This rider is applicable to all of Contractor's subcontractors having subcontracts with a value in excess of \$100,000; accordingly, Contractor shall include this rider in all subcontracts with a value a value in excess of \$100,000.
2. Paragraph 1 is not applicable to this Contract if it is valued at \$100,000 or less. Subparagraphs (a), (b), (d), and (e) of paragraph 1 are not applicable to this Contract if it was solicited pursuant to a finding of an emergency. Subparagraph (c) of paragraph 1 is neither applicable to this Contract if it was solicited prior to October 18, 2012 nor if it is a renewal of a contract executed prior to October 18, 2012.

NOTICE TO BIDDERS

Please be advised that the City of New York has revised the form of the performance bond that is required for City construction contracts that exceed \$5 million. The form of bond required for contracts that do not exceed \$5 million has not changed. The City's payment bond remains unchanged.

The bond form for contracts that do not exceed \$5 million has been approved by the U.S. Small Business Administration ("SBA") for participation in their Bond Guarantee Program. The SBA's Bond Guarantee Program enables eligible small businesses to obtain or increase bonding by having the SBA act as a partial guarantor of the contractor to the surety. For information concerning the SBA program, including current limits on what size contracts are eligible for participation in the program, go to www.sba.gov/osg. If you are interested in participating in this program, we suggest that you contact your broker or the SBA.

In order to maximize participation by small businesses in the SBA Guarantee Program, the City also encourages prime contractors who are awarded contracts greater than \$5 million to allow their subcontractors to use the SBA-approved form, particularly on contracts that are subject to Local Law 129 (the M/WBE program), if the prime contractor requires subcontractors to obtain performance bonds.

(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*

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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 to 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 Bid Submission Requirements are set forth on page 2 of the Bid Booklet.

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.

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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.

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- 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.

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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

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- 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.

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- 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

SEPTEMBER 2008

(NO TEXT ON THIS PAGE)

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WITNESSETH:

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

**CHAPTER I
THE CONTRACT AND DEFINITIONS**

ARTICLE 1. THE CONTRACT

1.1 Except for titles, subtitles, headings, running headlines, tables of content 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 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.

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 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.

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

2.1.5 "**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.

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

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

2.1.8 "**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.

2.1.9 "**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.

2.1.10 "**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.

2.1.11 "**Contractor**" shall mean the entity which executed this Contract, whether a corporation, firm, partnership, joint venture, individual, or any combination thereof, and it(s), 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.

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

2.1.13 "**Engineer**" or "**Architect**" or "**Project Manager**" shall mean the person so designated in writing by the Commissioner to act as such in relation to this Contract, including a private Architect or Engineer or Project Manager, as the case may be.

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

2.1.15 "**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.

2.1.16 "**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.

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

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

2.1.19 "**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.

2.1.20 "**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.

2.1.21 "**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.

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

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

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

2.1.25 "**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.

2.1.26 "**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.

2.1.27 "**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.

2.1.28 "**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.

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

2.1.30 "**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, at the site. Wherever the word Subcontractor appears, it shall also mean Sub-Subcontractor.

2.1.31 "**Substantial Completion**" shall mean the written determination by the Commissioner that the Work required under this Contract is substantially, but not entirely, complete.

2.1.32 "**Treasurer**" shall mean the Commissioner of the Department of Finance of the City of New York.

2.1.33 "**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 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 Department of Environmental Protection.

5.3.2 The Contractor agrees to comply with Section 24-219 of the Administrative Code of the City ("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 work 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 New York City Department of Environmental Protection. In addition, the Contractor's certified Construction Noise Mitigation Plan is subject inspection by the Department of Environmental Protection in accordance with 15 RCNY §28-101. No Contract work may take place at a worksite 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 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 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.

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 to fulfill the requirements of this Article 5.4.2, where the Commissioner of the New York 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 City agencies and Contractors. Any such determination shall expire after six months unless renewed.

5.4.2(c) Contractors shall not be required to comply with this Article 5.4.2 where the 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 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 is available. Any finding made pursuant to this subdivision shall expire after sixty days, at which time the requirements of this Article 5.4.2 shall be in full force and effect unless the 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 Agency issuing this solicitation.

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 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 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 calendar 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)(1) Where the 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 those paragraphs is unavailable for such vehicle, Contractor shall use whatever technology for reducing the emission of pollutants, if any, is available and appropriate for such vehicle.

5.4.3(d)(2) 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, 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)(3) In determining which technology to use for the purposes of Articles 5.4.3(d)(1) and 5.4.3(d)(2) above, 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)(4) Contractors 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 Agency issuing the solicitation. Any finding or waiver made or issued pursuant to Articles 5.4.3(d)(1) and 5.4.3(d)(2) above shall expire after one hundred eighty days, at which time the requirements of Article 5.4.3(a) shall be in full force and effect unless the 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. Contractors 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) 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 and ten thousand 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 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 Department the following information:

5.4.6(1) The total number of diesel-powered Nonroad Vehicles used to fulfill the requirements of this Public Works Contract;

5.4.6(2) The number of such Nonroad Vehicles that were powered by Ultra Low Sulfur Diesel Fuel;

5.4.6(3) 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(4) 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(5) The locations where such Nonroad Vehicles were used; and

5.4.6(6) 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.

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 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 of New York 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 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 terms shall not apply to horticultural maintenance vehicles used for landscaping purposes that are powered by a Nonroad Engine of sixty-five horsepower 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.

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 horsepower (HP) rating of 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.

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 the persons and 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 notify in writing the commercial general liability insurance carrier, and, where applicable, the worker's compensation and/or other insurance carrier, of any such loss, damage, injury, or accident, and any claim or suit arising therefrom, immediately, but not later than 20 days after such event. The **Contractor's** notice to the commercial general liability insurance carrier must expressly specify that "this notice is being given on behalf of the City of New York as Additional Insured as well as [the Contractor] as Named Insured." The **Contractor's** notice to the insurance carrier shall contain the following information: the name of the **Contractor**, the number of the **Contract**, the date of the occurrence, the location (street address and borough) of the occurrence, and the identity of the persons or things injured, damaged or lost.

7.3.2(a) At the time notice is provided to the insurance carrier(s), the **Contractor** shall provide copies of such notice to the **Comptroller** and the **Commissioner**. Notice to the **Comptroller** shall be sent to the Insurance Unit, NYC Comptroller's Office, 1 Centre Street – Room 1222, New York, New York, 10007. Notice to the **Commissioner** shall be sent to the address set forth in Schedule A of the General Conditions.

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 indemnify, defend and hold the **City**, its employees and agents (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 **Contractor** waives all rights against the **City** for any damages or losses for which either is covered under any insurance required under Article 22 (whether or not such insurance is actually procured) or any other insurance applicable to the operations of the **Contractor** and/or its **Subcontractors** in the performance of this **Contract**.

7.6 The provisions of this Article 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 **Work** on the date specified in a written notice signed by the **Commissioner**. The time for performance of the **Work** under the **Contract** shall be computed from the date specified in such written notice. **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 herein, 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 with this **Contract**, unless otherwise directed by the **Engineer**, shall submit to the **Engineer** a proposed progress schedule 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**; 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** 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 enable 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, 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 fully 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 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.

11.2 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**.

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** shall determine 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 (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 this **Contractor's** failure to comply with the **Engineer's** direction 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 **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 suit based upon such claim and if any judgment or claims (even if the allegations of the suit 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 and the **PPB Rules**.

13.2 Any extension of time may be granted only by the **Commissioner** 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 officers, 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 **Commissioner** 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 **Commissioner** 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 **Commissioner** or the Board on an application for an extension of time shall be binding and conclusive on the **Contractor**.

13.6 The granting of an application for an extension of time for causes of delay other than those herein referred to shall be entirely within the discretion of the **Commissioner** or the Board.

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 **Commissioner** of the condition which allegedly has caused or is causing the delay, and shall submit a written application to the **Commissioner** 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 bid amount;

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 **Commissioner** 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 **Commissioner** 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 **Commissioner** 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 **Commissioner**, 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 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, and agrees that all it may be entitled to on account of any such delay is an extension of time to complete performance of the **Work** as provided herein.

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 in Articles 14.2.1 and 14.2.2 have been met. The **Commissioner** will then issue a Certificate of **Substantial Completion**.

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 Punch List and Date for **Final Acceptance**: Following inspection of the **Work**, the **Engineer** shall furnish the **Contractor** a final punch list, specifying all items of **Work** to be completed. The **Contractor** shall then submit to the **Engineer** dates for the completion of each specified item of **Work**. 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, shall establish dates for the completion of each item of **Work**. The latest completion date specified shall be the date for **Final Acceptance** of the **Work**.

14.3 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**.

14.4 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.

14.5 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.

14.6 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 complete the **Work** within the time fixed for such 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 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 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 shall apply to the **Contractor** if it 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 this article. In the event the **Commissioner** takes over, uses, occupies, or operates any part of the **Work**:

16.1.1 the **Commissioner** 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, 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 If an approved **Subcontractor** elects to subcontract any portion of its subcontract, the proposed subcontract shall be submitted in the same manner as directed above.

17.4 The **Commissioner** will notify the **Contractor** in writing whether the proposed **Subcontractor** is qualified or not qualified. If the proposed **Subcontractor** is not qualified, the **Contractor** may submit another proposed **Subcontractor** unless the **Contractor** decides to do the **Work**. No **Subcontractor** shall be permitted on the **Site** unless approved.

17.5 Before entering into any subcontract hereunder, the **Contractor** shall inform the **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**.

17.6 Documents given to a **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.

17.7 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.

17.8 The **Contractor** shall be responsible for ensuring that all **Subcontractors** performing **Work** at the **Site** have either their own insurance coverage or are covered by the **Contractor's** insurance as required by Article 22.

17.9 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:

17.9.1 **Payment to Subcontractors:** The agreement between the **Contractor** and its **Subcontractors** shall contain the same terms and conditions as to method of payment for **Work**, labor and materials, and as to retained percentages, as are contained in this **Contract**.

17.9.2 **Prevailing Rate of Wages:** The agreement between the **Contractor** and its **Subcontractors** shall include the prevailing wage rates and supplemental benefits to be paid in accordance with Labor Law Section 220.

17.9.3 **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 its **Subcontractors** in excess of \$50,000 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.).

17.10 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 adjusted.

17.11 On **Contracts** where 100% 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.

17.12 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, or conveyance shall not be valid until filed in the office of the **Commissioner** and the **Treasurer**, 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 or conveyance, 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 GUARANTY

ARTICLE 19. SECURITY DEPOSIT

19.1 The bid deposit, if required, shall be retained by the **Comptroller** as security for the **Contractor's** faithful performance of the **Contract** and will be returned to the **Contractor** only after the sum retained under Article 21 equals the amount of the bid deposit, subject to the other provisions of this **Contract**. If performance and payment bonds are required, any bid security posted shall be returned within a reasonable time after posting of such bonds and execution of this **Contract** by the **City**. When no partial payments are provided, the bid deposit will be released when final payment is certified to the **Comptroller** for payment.

19.2 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**:

19.2.1 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

19.2.2 To indemnify the **City** against any and all claims.

ARTICLE 20. PAYMENT GUARANTEE

20.1 On **Contracts** where 100% performance bonds and payment bonds are executed, this article does not apply.

20.2 In the event the terms of this **Contract** do not require the **Contractor** to provide a payment bond, the **City** shall, in accordance with the terms of this article, guarantee payment of all lawful demands 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 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 this Article 20.3.

20.3.2 Nothing in this article 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**.

20.3.3 All demands made against the **City** pursuant to this article shall be made within four (4) months from the date payment is due on the invoice or invoices submitted by the beneficiary to the **Contractor** for labor or **Work** done or for materials or supplies delivered, or, if the demand is for wages, four (4) months from the date the wages were due to be paid to the beneficiary.

20.3.4 All demands made against the **City** by such beneficiary shall be presented to the **Engineer** along with all written documentation concerning the demand which the **Engineer** deems 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.

20.3.5 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.

20.3.6 The **City** will not initiate the payment process of this article or make payment on a demand where the beneficiary making the demand has filed a lien against the **Work** or otherwise sues the **City** prior to receiving a written notice from the **City** that it will not pay the demand.

20.3.7 No beneficiary shall be entitled to interest from the **City**, or to any other costs, including, but not limited to, attorney's fees.

20.4 Upon the receipt by the **City** of a demand pursuant to this article, 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.

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**.

20.4.2 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 lien has been filed, the terms and conditions set forth in Article 23 shall apply.

20.5 The provisions of this article 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, 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 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 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 his **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 within the one year limitations period set forth in Section 137(4)(b).

ARTICLE 21. RETAINED PERCENTAGE

21.1 If this **Contract** requires 100% 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 100% performance and payment security and if the price for which this **Contract** was awarded does not exceed \$500,000, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, ten (10%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.3 If this **Contract** does not require 100% performance and payment security and if the price for which this **Contract** was awarded exceeds \$500,000, 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.



CERTIFICATE OF LIABILITY INSURANCE

TRIUM-3

OP ID: SL

DATE (MM/DD/YYYY)
11/21/2013

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 True & Associates 325 North Ave East Westfield, NJ 07090 Jonathan Raucci		Phone: 908-232-0760 Fax:	CONTACT NAME: PHONE (A/C, No, Ext): 908-232-0760 E-MAIL ADDRESS: FAX (A/C, No): 908-232-5761														
INSURED Triumph Construction Corp. 1354 Seneca Avenue Bronx, NY 10474		<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: Travelers Property Casualty</td> <td>25674</td> </tr> <tr> <td>INSURER B: Wausau Underwriters Insurance</td> <td>26042</td> </tr> <tr> <td>INSURER C: Scottsdale Indemnity Co.</td> <td>15580</td> </tr> <tr> <td>INSURER D: Ironshore Indemnity Co</td> <td>23647</td> </tr> <tr> <td>INSURER E: Navigators Insurance Company</td> <td>42307</td> </tr> <tr> <td>INSURER F: The Travelers Insurance Co.</td> <td>01899</td> </tr> </tbody> </table>		INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Travelers Property Casualty	25674	INSURER B: Wausau Underwriters Insurance	26042	INSURER C: Scottsdale Indemnity Co.	15580	INSURER D: Ironshore Indemnity Co	23647	INSURER E: Navigators Insurance Company	42307	INSURER F: The Travelers Insurance Co.	01899
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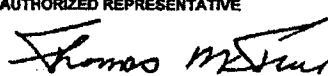
COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR	X		VTJEXGL828K6610-TIL13	08/01/2013	08/01/2014	EACH OCCURRENCE \$ 2,000,000
	<input type="checkbox"/> GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 Empl Ben \$ 1,000,000
X	<input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS			ASJ-Z11260471013	08/01/2013	08/01/2014	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						EACH OCCURRENCE \$ 3,000,000 AGGREGATE \$ 3,000,000
C	<input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$			NX10000018	08/01/2013	08/01/2014	WC STATUTORY LIMITS OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			001348501	04/30/2013	04/30/2014	Per Claim 1,000,000
E	Excess Liab			NY13EXC7353581V	08/01/2013	08/01/2014	EaOcc/Agg 7,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 RE: FMS ID: HWPLZ004M, E-PIN: 85013B0092001, DDC PN: 8502013HW0043C,
 Reconstruction of Pershing Square West at Park Avenue West from 40th Street to 42nd Street - Borough of Manhattan
 See attached.

CERTIFICATE HOLDER**CANCELLATION**

NYCDDC. New York City Department of Design and Construction Chief of Payments & Insurance 30-30 Thomson Avenue - 4th Flr Long Island City,, NY 11101	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
--	---



NOTEPAD:HOLDER CODE NYCDDC.
INSURED'S NAME Triumph Construction Corp.TRIUM-3
OP ID: SLPAGE 2
DATE 11/21/13

Insurer F: The Travelers Insurance Co.
Property Policy - Policy No. QT6609B376072COF13
Policy Term 8/1/13 to 8/1/14
Business Personal Property coverage at field office - \$40,000 limit

Insurer G: National Benefit Life Ins Co.
Disability Policy - Policy No. 89100232606
Policy Term 12/31/12 to 12/31/13
Statutory Limits

City of New York, including its officials and employees, and The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies, and Consolidated Edison are named as Additional Insureds on the General Liability policy.

City of New York, including its officials and employees, and The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies, are named as Additional Insureds on the Automobile policy.



SCHEDULE A

(RELATING TO ARTICLE 22 - INSURANCE)

PART II. BROKER'S CERTIFICATION

[Pursuant to Article 22.3.1(a) 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 complete copies of all policies referenced in the Certificate of Insurance. In the absence of completed policies, binders are acceptable.]

CERTIFICATION BY BROKER

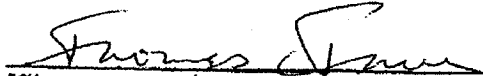
The undersigned insurance broker represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects, and that the described insurance is effective as of the date of this Certification.

True & Associates

[Name of broker (typewritten)]

325 North Avenue East, Westfield, NJ 07090

[Address of broker (typewritten)]

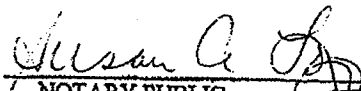


[Signature of authorized official or broker]

Thomas M. True President

[Name and title of authorized official (typewritten)]

Sworn to before me this
21st day of November, 2003 2013



NOTARY PUBLIC

Susan A. Lajoie
NOTARY PUBLIC OF
NEW JERSEY
Commission Expires
November 7, 2017

(05/19/03)

SA-9



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

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

This endorsement modifies insurance provided under the following:
SELF-INSURED EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SCHEDULE

Name of Person or Organization:

New York City Department of Design and Construction and any other person or organization, except any architect, engineer or surveyor, that you agree in a written contract with New York City Department of Design and Construction to include as an additional insured on this Coverage Part, provided that such written contract was signed and executed by you before, and is in effect when, the "bodily injury" or "property damage" occurs or the "personal injury" or "advertising injury" offense is committed.

Location of Covered Operations:

Any project to which an applicable written contract described in the Name of Additional Insured Person(s) or Organization(s) section of this Schedule applies.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement).

- A. **Section II – Who is An Insured** is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.
- B. With respect to the insurance afforded to these additional insureds, the following exclusion is added:

2. Exclusions

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

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



POLICY NUMBER: VTJ-EXGL-828K6610-TIL-13

SELF-INSURED EXCESS
ISSUE DATE: 08-02-13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

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

This endorsement modifies insurance provided under the following:

SELF INSURED EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SCHEDULE

Name Of Person Or Organization:

New York City Department of Design and Construction and any other person or organization, except any architect, engineer or surveyor, that a written contract with **New York City Department of Design and Construction** specifically requires you to include as an additional insured on this Coverage Part for "bodily injury" or "property damage" included in the "products-completed operations hazard", provided that such contract was signed and executed by you before, and is in effect when, the "bodily injury" or "property damage" occurs.

Location And Description Of Completed Operations

Any project to which an applicable written contract described in the Name of Additional Insured Person(s) or Organization(s) section of this Schedule applies.

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

Section II – Who Is An Insured is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" at the location designated and described in the schedule of this endorsement performed for that insured and included in the "products-completed operations hazard".



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

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

This endorsement modifies insurance provided under the following:

SELF-INSURED EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SCHEDULE

Names of Additional Insured Person(s) or Organization(s):

Consolidated Edison and any other person or organization, except any architect, engineer or surveyor, that you agree in a written contract with Consolidated Edison to include as an additional insured on this Coverage Part, provided that such written contract was signed and executed by you before, and is in effect when, the "bodily injury" or "property damage" occurs or the "personal injury" or "advertising injury" offense is committed.

Location of Covered Operations:

Any project to which an applicable written contract described in the Name of Additional Insured Person (s) or Organization (s) section of this Schedule applies.

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

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

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

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

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

This insurance does not apply to "bodily injury" or "property damage" occurring, or "personal injury" or "advertising injury" arising out of an offense committed, after:

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



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:
SELF-INSURED EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SCHEDULE

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

Consolidated Edison and any other person or organization, except any architect, engineer or Surveyor, that a written contract with Consolidated Edison specifically requires you to include as an Additional Insured on this Coverage Part for "bodily injury" or "property damage" included in the "products-completed operations hazard", provided that such contract was signed and executed by you before, and is in effect when, the "bodily injury" or "property damage" occurs.

Location And Description Of Completed Operations

Any project to which an applicable written contract described in the Name of Additional Insured Person(s) Or Organization (s) section of this Schedule applies.

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

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

location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".



- Capital Contract
 Operating Contract
 Outside Contract



New York City Transit CERTIFICATE OF INSURANCE

AGREEMENT or CONTRACT #: HWPLZ004M		AGREEMENT or CONTRACT NAME/DESCRIPTION: Reconstruction of Pershing Square West at Park Avenue West from 40 th St to 42 nd St, Borough of Manhattan			
INSURANCE PRODUCER: True & Associates ADDRESS: 325 North Avenue East, Westfield, NJ 07090 PHONE #: -9082320760		CERTIFICATE ISSUANCE DATE: 11/21/13	DATE RECEIVED:	REFERENCE #:	
INSURED: Triumph Construction Corp. ADDRESS: 1354 Seneca Avenue, Bronx, NY 10474 PHONE #: 718-861-6060		CO LTR	COMPANIES AFFORDING COVERAGE		
CERTIFICATE HOLDER: New York City Transit/MTA Attention: Risk & Insurance Management ADDRESS: 2 Broadway 21 st Floor New York, NY 10004 Phone #: Capital Contracts Only: (646) 252-1426 Operating Contracts Only: (646) 252-1428		A	Travelers Property Casualty Co	NAIC # 25674	
		B	Wausau Underwriters Insurance Co	NAIC # 26042	
		C	Scottsdale Indemnity Co	NAIC # 15580	
		D	Navigators Insurance Co.	NAIC # 42307	
		E	National Benefit Life Ins Co	NAIC # 61409	
		F	Ironshore Indemnity Co.	NAIC # 23647	
		G		NAIC #	

COVERAGES (See Notes 1 and 2)

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	EFFECTIVE DATE	EXPIRATION DATE	LIMITS	
A	GENERAL LIABILITY <input checked="" type="checkbox"/> Commercial General Liability Form <input checked="" type="checkbox"/> Underground Expl. & Collapse Hazard <input checked="" type="checkbox"/> Products/Completed Operations <input checked="" type="checkbox"/> Contractual Liability <input checked="" type="checkbox"/> Independent Contractors <input checked="" type="checkbox"/> Fifty Foot Exclusion Removed <input checked="" type="checkbox"/> Personal & Advertising Injury <input type="checkbox"/> SIR/Deductible \$ _____	VTJEXGL8 28K6610- TIL13	8/1/13	8/1/2014	BI & PD COMBINED OCCURRENCE	\$2,000,000
					GENERAL AGGREGATE	\$4,000,000
					PRODUCTS/COMPLETED OPERATIONS AGGREGATE	\$4,000,000
					OTHER	\$
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> Any Auto <input type="checkbox"/> Owned Autos <input checked="" type="checkbox"/> Hired Autos <input checked="" type="checkbox"/> Non-Owned Autos	ASJ Z11260471- 013	8/1/13	8/1/14	BODILY INJURY (Per Occurrence)	\$
					PROPERTY DAMAGE (Per Occurrence)	\$
					BODILY INJURY/PROPERTY DAMAGE COMBINED SINGLE LIMIT (Each Accident)	\$1,000,000
	GARAGE LIABILITY <input type="checkbox"/> Any Auto				AUTO ONLY EACH ACCIDENT	\$
					OTHER THAN AUTO ONLY	EA ACC \$ AGG \$
C	EXCESS LIABILITY <input type="checkbox"/> Umbrella Form <input checked="" type="checkbox"/> Other Than Umbrella Form <input type="checkbox"/> SIR/Deductible \$ _____	NXS000041 6	8/1/13	8/1/14	EACH OCCURRENCE	\$3,000,000
					AGGREGATE	\$3,000,000
	WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY <input type="checkbox"/> USLH <input type="checkbox"/> Jones Act <input type="checkbox"/> "All States" Coverage				<input type="checkbox"/> STATUTORY LIMITS EMPLOYER'S LIABILITY \$	
F	PROFESSIONAL LIABILITY <input type="checkbox"/> Includes Pollution Liability <input checked="" type="checkbox"/> Deductible \$5,000	001348501	4/30/13	4/30/14	Per Claim	\$100,000
D	OTHER: <u>Excess Liability</u>	NY13EXC7 353581V	8/1/13	8/1/14	Per Occurrence/ Aggregate	\$7,000,000
	OTHER: _____					\$
E	OTHER: <u>Disability</u>	891002326 06	12/31/12	12/31/13	statutory limits	\$

EVIDENCE OF RAILROAD PROTECTIVE LIABILITY AND/OR BUILDER'S RISK INSURANCE, WHEN APPLICABLE, REQUIRES SUBMISSION OF THE ORIGINAL POLICY.
 THE ORIGINAL BINDER(S) WILL BE ACCEPTED, PENDING ISSUANCE OF THE ORIGINAL POLICY(S). *Revised 8/09*



LIABILITY COVERAGES:

ADDITIONAL INSUREDS (See Note 3) Check all that apply [X]
Coverage: General Liability, Garage Liability, Excess/Umbrella Liability
Contractor's Pollution Liability, Pollution Legal Liability, etc.

For all NYCT Agreements (Other than 2 Broadway)
[X] New York City Transit Authority (NYCT), Manhattan and Bronx Surface
Transit Operating Authority (MaBSTOA), Staten Island Rapid Transit
Operating Authority (SIRTOA), MTA Capital Construction Co.,
Metropolitan Transportation Authority (MTA) and its subsidiaries and
affiliates, and the City of New York (as owner).

For all NYCT - 2 Broadway Agreements (when work is performed at 2
Broadway)

[] New York City Transit Authority (NYCT), Triborough Bridge & Tunnel
Authority (B&T), Metro-North Commuter Railroad Company (MNR), Long
Island Rail Road (LIRR), MTA Capital Construction Co., Metropolitan
Transportation Authority (MTA) and its subsidiaries and affiliates, the
State of New York and the City of New York (as owner), United States
Trust Company of New York as Trustee under the 2 Broadway Ground
Lease Trust, Two Broadway LLC, ZAR Realty, Colliers ABR, Inc., Colliers
ABR Payroll Company, Inc.

[] Other: _____

[] ADDITIONAL NAMED INSUREDS, when applicable

PROPERTY COVERAGES:

(See Note 3) Check all that apply [X]

[X] ADDITIONAL NAMED INSUREDS/LOSS PAYEE
Property, Builder's Risk, etc.

[X] LOSS PAYEE
Coverage: Crime Insurance, Valuable Papers

For all NYCT Agreements (Other than 2 Broadway)
[X] New York City Transit Authority (NYCT), Manhattan and Bronx Surface
Transit Operating Authority (MaBSTOA), Staten Island Rapid Transit
Operating Authority (SIRTOA), MTA Capital Construction Co.,
Metropolitan Transportation Authority (MTA) and its subsidiaries and
affiliates, and the City of New York (as owner).

For all NYCT - 2 Broadway Agreements (when work is performed at 2
Broadway)

[X] New York City Transit Authority (NYCT), Triborough Bridge & Tunnel
Authority (B&T), Metro-North Commuter Railroad Company (MNR), Long
Island Rail Road (LIRR), MTA Capital Construction Co., Metropolitan
Transportation Authority (MTA) and its subsidiaries and affiliates, the
State of New York and the City of New York (as owner), United States
Trust Company of New York as Trustee under the 2 Broadway Ground
Lease Trust, Two Broadway LLC, ZAR Realty, Colliers ABR, Inc., Colliers
ABR Payroll Company, Inc.

[] Other: _____

NOTE 1: The subscribing insurance company(s), authorized to do business in the State of New York, certifies that insurance of the kinds and types and for
limits of liability herein stated, covering the Agreement/Contract herein designated, has been procured by and furnished on behalf of the Insured
and is in full force and effect for the period listed on the front of this Certificate of Insurance. In addition, the subscribing insurance company(s)
certifies that the insurance limits for General Liability Insurance are not amended by deductible clauses of any nature except as has been disclosed
to and approved by the New York City Transit Authority (NYCT); and that coverage is afforded for the Insured's obligations under that provision of
the contract providing for indemnification of the Indemnified Parties, including the New York City Transit Authority (NYCT), named therein. When
applicable, the subscribing insurance company(s) certifies that any exclusion applying to construction or demolition operations on or within fifty (50)
feet of railroad property (stations, yards, tracks, etc.) has been removed.

NOTE 2: The subscribing insurance company(s) shall endeavor that no policy referred to herein shall be changed or canceled until thirty (30) days
written notice has been sent to the following address: New York City Transit Authority c/o MTA Risk and Insurance Management Department, 2
Broadway, 21st Floor, New York, NY 10004.

NOTE 3: All references to Additional Named Insureds and Additional Insureds include those entities' directors, officers, employees, partners, agents,
subsidiaries and affiliates.

NOTE 4: This certificate is issued to the Certificate Holder in consideration of the Agreement/Contract entered into with the named insured. It is understood
and agreed that the certificate holder relies on the certificate as basis for continuing such Agreement/Contract with the name insured.

AUTHORIZED INSURER/PRODUCER

True & Associates

BY

[Signature]
(signature of authorized insurer/producer)

TITLE

President

STATE OF New Jersey)
COUNTY OF Union) s.s.

On this 21st day of November 2013, before me personally came Thomas M. True, to me known, who being
duly sworn, did depose and say that he/she resides in Annandale, NJ, that he/she is the
President of the corporation and described in and which executed the foregoing Certificate of Insurance, that he/she is fully
authorized to execute the foregoing Certificate of Insurance.

Susan A. Lojo
NOTARY PUBLIC OF
NEW JERSEY

[Signature]
(Notary Public)

CERTIFICATES OF INSURANCE MUST BE COMPLETED BY AUTHORIZED INSURANCE REPRESENTATIVES ONLY.



NYSIF 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

***** 134050635
LOVELL SAFETY MGMT CO., LLC
110 WILLIAM STREET 12TH FLR
NEW YORK NY 10038

POLICYHOLDER TRIUMPH CONSTRUCTION CORP. 1354 SENECA AVENUE BRONX NY 10474	CERTIFICATE HOLDER THE CITY OF NY DEPARTMENT OF DESIGN AND CONSTRUCTION 30-30 THOMSON AVENUE - 4TH FLR LONG ISLAND CITY NY 11101
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POLICY NUMBER G 2266 243-1	CERTIFICATE NUMBER 478457	PERIOD COVERED BY THIS CERTIFICATE 04/01/2013 TO 04/01/2014	DATE 4/17/2013
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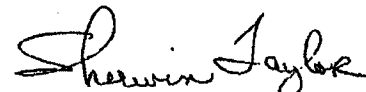
THIS IS TO CERTIFY THAT THE POLICYHOLDER NAMED ABOVE IS INSURED WITH THE NEW YORK STATE INSURANCE FUND UNDER POLICY NO. 2266 243-1 UNTIL 04/01/2014, COVERING THE ENTIRE OBLIGATION OF THIS POLICYHOLDER FOR WORKERS' COMPENSATION UNDER THE NEW YORK WORKERS' COMPENSATION LAW WITH RESPECT TO ALL OPERATIONS IN THE STATE OF NEW YORK, EXCEPT AS INDICATED BELOW.

IF SAID POLICY IS CANCELLED, OR CHANGED PRIOR TO 04/01/2014 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 POLICY DOES NOT COVER THE SOLE PROPRIETOR, PARTNERS AND/OR MEMBERS OF A LIMITED LIABILITY COMPANY.

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: 468230754



ARTICLE 22. INSURANCE

22.1 Types of Insurance: 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**), the **Contractor** shall effect 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 issued by companies that meet the standards of Article 22.2.1 and shall be primary (and non-contributing) to any insurance or self-insurance maintained by the **City**.

22.1.1 Commercial General Liability Insurance: The **Contractor** shall provide a Commercial General Liability Insurance policy covering the **Contractor** as Named Insured and the **City** as an Additional Insured. This policy shall protect the **City** and the **Contractor** from claims for property damage and/or bodily injury, including death, which may arise from any of the operations under this **Contract**. Coverage under this policy shall be at least as broad as that provided by ISO Form CG 0001 (10/01 ed.), must be "occurrence" based rather than "claims-made", and shall 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, Medical Payments, Independent Contractors, Personal Injury (Contractual Exclusion deleted), Explosion, Collapse and Underground Property, and Incidental Malpractice. If such insurance contains an aggregate limit, it shall apply separately to this **Project**.

22.1.1(a) Such Commercial General Liability Insurance shall name the **City**, together with its officials and employees, as an Additional Insured under this policy. Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees, and shall be at least as broad as either Insurance Services Office ("ISO") Form CG 20 10 (07/04 ed.) or Form CG 20 33 (07/04 ed.) and shall provide completed operations coverage at least as broad as CG 20 37 (07/04 ed.).

22.1.1(b) If this **Contract** is equal to or greater than Ten Million Dollars (\$10,000,000.00), each Commercial General Liability Insurance policy provided shall contain each of the following endorsements:

22.1.1(b)(i) The Duties in the Event of Occurrence, Claim or Suit condition of the policy is amended per the following: If and insofar as knowledge of an "occurrence", "claim", or "suit" is relevant to the **City of New York** as Additional Insured under this policy, such knowledge by an agent, servant, official, or employee of the **City of New York** will not be considered knowledge on the part of the **City of New York** of the "occurrence", "claim", or "suit" unless the following position shall have received notice thereof from such agent, servant, official, or employee: Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department; and

22.1.1(b)(ii) Any notice, demand or other writing by or on behalf of the Named Insured to the Insurance Company shall also be deemed to be a notice, demand, or other writing on behalf of the **City** as Additional Insured. Any response by the Insurance Company to such notice, demand or other writing shall be addressed to Named Insured and to the **City** at the following addresses: Insurance Unit, NYC Comptroller's Office, 1 Centre Street – Room 1222, New York, N.Y. 10007; and Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, NY 10007.

22.1.2 Workers' Compensation Insurance and Disability Benefits Insurance: The **Contractor** shall provide, and ensure that each **Subcontractor** provides, Workers Compensation 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 qualifying for insurance pursuant to Article 22.1.4).

22.1.3 Employers' Liability Insurance: The **Contractor** shall provide, and ensure that each **Subcontractor** provides, Employers Liability Insurance affording compensation due to bodily injury by accident or disease sustained by any employee arising out of and in the course of his/her employment under this **Contract** (except for those qualifying for insurance pursuant to Article 22.1.4).

22.1.4 United States Longshoremen's and Harbor Workers Act and/or Jones Act Insurance: The **Contractor** shall provide, and ensure that each **Subcontractor** provides, 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**.

22.1.5 Builders' Risk Insurance: The **Contractor** shall provide a Builders' Risk Insurance policy covering all risks in completed value form. Such policy shall cover the total value of the **Work** performed in accordance with Schedule A, as well as the value of any equipment, supplies and/or material for the **Project** that may be in storage (on or off the **Site**) or in transit. The policy shall cover the cost of removing debris, including demolition as may be legally necessary by the operation of any law, ordinance or regulation, and for loss or damage to any owned, borrowed, leased or rented capital equipment, tools, including tools of their agents and employees, staging towers and forms, and property of the **City** held in their care, custody and/or control. Such policy shall name as insureds the **City**, the **Contractor**, and its **Subcontractors**. The Builders' Risk policy shall contain the following endorsements:

22.1.5(a) The **City** and the **Contractor** shall be named as loss payee for the **Work** in order of precedence, as their interest may appear; and

22.1.5(b) In the event the loss occurs at an occupied facility, the policy shall permit occupancy without the consent of the Insurance Company; and

22.1.5(c) In the event that the insurance policy has been issued by a mutual insurance company, the following language shall be included: "The City of New York is not liable for any premium or assessment under this policy of insurance. The First Named Insured is solely liable therefor."

22.1.6 Comprehensive Business Automobile Liability Insurance: The **Contractor** shall provide a Comprehensive Business Automobile Liability policy for liability arising out of any owned, non-owned, leased and hired vehicles to be used in connection with this **Contract**. Coverage should be at least as broad as ISO Form CA0001, ed. 10/01.

22.1.6(a) If autos 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.

22.1.7 Pollution/Environmental Liability Insurance: The **Contractor** shall provide Pollution/Environmental Liability Insurance covering bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured. 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, suit, or proceedings against the **City** arising from the operations under this **Contract**. Such insurance shall be in the **Contractor's** name and list the **City** as an Additional Insured. Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees, and shall be at least as broad as provided to the **Contractor** for this **Project**.

22.1.7(a) If such coverage 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 years from the time the **Work** under this **Contract** is completed.

22.1.8 Marine Insurance:

22.1.8(a) Marine Protection and Indemnity Insurance: The **Contractor** shall provide a Marine Protection and Indemnity policy with coverage at least as broad as policy form SP-23. The policy shall provide coverage for the **Contractor** and for the **City** (together with its officials and employees) as Additional Insured for bodily injury and property damage arising from marine operations under this **Contract** including injury or death of crew members (if not fully provided through other insurance), damage to piers, wharves and other fixed or movable structures and loss of or damage to any other vessel or craft, or to property on such other vessel or craft, not caused by collision.

22.1.8(b) Ship Repairers Legal Liability Insurance: The **Contractor** shall provide a Ship Repairers Legal Liability Insurance policy covering all repair operations under this **Contract** at or in the vicinity of a designated approved port or yard under this **Contract**. The policy shall provide coverage from the point of acceptance of care custody and control of any **City** vessel. The policy shall provide Bailee Coverage for any **City** vessel in the **Contractor's** care, custody and control and coverage for damage to property of others caused by any **City** vessel in the **Contractor's** care custody and control.

22.1.8(c) Collision Liability/Towers Liability Insurance: The **Contractor** shall provide a Collision Liability/Towers Liability Insurance policy with coverage for the **Contractor** and for the **City** (together with its officials and employees) as Additional Insured at least as broad as the American Institute Tug Form (08/01/76) for all tugs used under this **Contract** and Collision Liability per American Institute Hull Clauses (6/2/77).

22.1.8(d) Marine Pollution Liability Insurance: The **Contractor** shall provide a Marine Pollution Liability Insurance policy covering itself as Named Insured and the **City** (together with its officials and employees) as Additional Insured for 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. Coverage under this policy shall be at least as broad as that provided by Water Quality Insurance Syndicate Form (09/98 ed.).

22.1.9 The **Contractor** shall provide such other types of insurance, at such minimum limits, as are specified in Schedule A of the General Conditions.

22.2 General Requirements for Insurance 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 AA, unless prior written approval is obtained from the Mayor's Office of Operations.

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 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 All required insurance policies, except for insurance required pursuant to Sections 22.1.2, 22.1.3, and 22.1.4, shall contain the following endorsement: "This policy may not be cancelled, terminated, modified or changed unless thirty (30) days prior written notice is sent by the Insurance Company to the Named Insured (or First Named Insured, as appropriate), the **Commissioner**, and to the **Comptroller**, attn: Office of Contract Administration, Municipal Building, Room 1005, New York, New York 10007."

22.3 Proof of Insurance:

22.3.1 Within ten (10) **Days** of award, the **Contractor** shall, for each policy required under this **Contract**, except for Workers Compensation Insurance and Disability Benefits Insurance and builders' risk insurance, file a Certificate of Insurance with the **Commissioner** pursuant to Article 22.6. For Workers' Compensation Insurance and Disability Benefits Insurance, the **Contractor** shall file proof of insurance in a form acceptable to the **Commissioner** within ten (10) **Days** of award. Accord forms are not acceptable proof of workers' compensation coverage. The Contractor must submit one of the following forms to the Department, or another form acceptable to the Department: C-105.2 -- Certificate of Workers' Compensation Insurance, or U-26.3 -- State Insurance Fund Certificate of Workers' Compensation Insurance. For builders' risk insurance, the **Contractor** shall file a Certificate of Insurance with the **Commissioner** at the direction of the **Commissioner** but in any event no later than ten (10) **Days** prior to commencement of the **Work**.

22.3.1(a) All Certificates of Insurance shall be in a form acceptable to the **City** and shall certify the issuance and effectiveness of the types of insurance specified in Schedule A, each with the specified minimum limits and evidence of the compliance with the Additional Insured or Named Insured provisions of Articles 22.1.1(a), 22.1.5, 22.1.7, and 22.1.8, as applicable. All Certificate(s) of Insurance shall be accompanied by either a duly executed "Certification by Broker" in the form contained in Part II of Schedule A or completed copies of all policies referenced in the Certificate of Insurance. In the absence of completed policies, binders are acceptable.

22.3.2 Certificates of Insurance confirming renewals of insurance shall be submitted to the **Commissioner** prior to the expiration date of coverage of policies required under this **Contract**. Such Certificates of Insurance shall comply with the requirements of Article 22.3.1(a) and, if applicable, Article 22.3.1(b).

22.3.3 The **Contractor** shall be obligated to provide the **City** with a copy of any policy required by this Article 22 upon the demand for such policy by the **Commissioner** or the New York City Law Department.

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 hereunder does not excuse the **Contractor** from securing a policy consistent with all provisions of this Article 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.

22.5 The **City** as Additional Insured or Loss Payee under **Subcontractors'** Insurance. The **Contractor** shall ensure that each **Subcontractor** name the **City** as Additional Insured or loss payee, as appropriate, under all policies covering **Work** performed by such **Subcontractor** under this **Contract**. The **City's** coverage as Additional Insured shall include the **City's** officials and employees and be at least as broad as that provided to the **Contractor**. The foregoing requirements shall not apply to insurance provided pursuant to Articles 22.1.2, 22.1.3, and 22.1.4.

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 If the **Contract** involves disposal of hazardous materials, the **Contractor** shall dispose such materials only at sites where the disposal site operator maintains Pollution Legal Liability Insurance in the amount of at least \$2,000,000 for losses arising from such disposal site.

22.8 Materiality/Non-Waiver: The **Contractor's** failure to secure policy(ies) in complete conformity with this Article, or to give the Insurance Company timely notice of any sort required in this **Contract** on behalf of the **City**, or to do anything else required by this Article 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.

22.9 Other Remedies: Insurance coverage in the minimum amounts provided for herein shall not relieve the **Contractor** or **Subcontractors** of any liability under this **Contract**, nor shall it preclude the **City** from exercising any rights or taking such other actions as are 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, and return the balance, if any, without interest, to the **Contractor**.

23.3 Liens: If at any time before or within thirty (30) **Days** after the **Work** is completed and accepted by the **City**, any persons claiming to have performed any labor or furnished any material toward the performance or completion of this **Contract**, shall file with the **Agency** and with the **Treasurer** any notice as is described in the New York State Lien Law, or any act of the Legislature of the State of New York, the **City** shall retain, from the monies due or to become due under this **Contract**, so much of such monies as shall be sufficient to pay the amount claimed in said notice, together with the reasonable costs of any action or actions brought or that may be brought to enforce such lien. The monies so retained shall be held by the **City** until the lien thereon created by the said act and the filing of the said notice shall be discharged pursuant to Law.

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 guarantee are provided for.

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 or lessees of the premises.

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 **Laws** 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 **Department**.

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 a time and material basis 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 on a time and material basis 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.

26.2.1 Necessary materials (including transportation to the **Site**); plus

26.2.2 Necessary direct labor, including payroll taxes 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, 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 PRIMEDIA (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 PRIMEDIA (the "Blue Book"). The reasonable rental value is 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 percent of such rental rates; second shift shall be sixty percent of the first shift rate; and third shift shall be forty

percent of the first shift rate. Equipment on standby shall be reimbursed at one-third the prorated monthly rental rate. **Contractor**-owned equipment includes equipment from rental companies affiliated with or controlled by the **Contractor**, as determined by the **Commissioner**. In establishing cost reimbursement for non-operating contractor-owned 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 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 Reasonable rental costs of non-**Contractor**-owned 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

26.2.7 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 shall be based upon the Manual Rate for such insurance for the applicable work classifications/codes, in accordance with the most recent schedule promulgated by the New York Compensation Insurance Rating Board; plus

26.2.8 Additional costs incurred as a result of the **Extra Work** for performance and payment bonds; plus

26.2.9 Ten (10%) 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

26.2.10 Ten (10%) percent of the total of items in Articles 26.2.1 through 26.2.5, plus item 26.2.9, 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

26.2.11 Five (5%) percent of the total of items in Article 26.2.6, 26.2.7, and 26.2.8 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**. The cost of such **Extra Work** and of such omitted or reduced **Work** shall be computed based upon applicable **Contract** unit prices. Where there are no applicable **Contract** unit prices, the cost of such **Extra Work** and of such omitted or reduced **Contract Work** shall

be computed in accordance with items 26.2.1 through 26.2.8. If the cost of such **Extra Work** exceeds the costs of such omitted or reduced **Contract Work**, the **Contract** price shall be increased by the difference, plus percentages for overhead and profit as provided in Articles 26.2.9 through 26.2.11. If the cost of the omitted or reduced **Contract Work** exceeds the cost of the **Extra Work**, then the **Contract** price shall be reduced by the difference.

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 that arise under, or by virtue of, this **Contract** shall be finally resolved in accordance with the provisions of this article 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 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 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 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 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, 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 disputed 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 **Contractor** thus brought into the dispute resolution proceeding shall have the same rights and obligations under this article 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 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. 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 **Agency 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 section 7-201 and 7-203 of the New York City 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 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 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;

27.6.1.1 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

27.6.2 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, 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 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 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 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 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 Corporation Counsel, the Director of the Office of Construction, 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 Laws 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.

27.8 Any termination, cancellation, or alleged breach of the **Contract** prior to or during the pendency of any proceedings pursuant to this article 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.

ARTICLE 28. RECORD KEEPING FOR EXTRA OR DISPUTED WORK

28.1 While the **Contractor** or any of its **Subcontractors** is performing **Extra Work** on a Time and Material Basis ordered by the **Commissioner** under Article 25, or is performing disputed **Work**, or complying with a determination or order under protest in accordance with Articles 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 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** 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 fully 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.

30.2 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, 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, 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, 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** or **Comptroller** 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** or **Comptroller** 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.

30.5 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 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** 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**, officer, 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 **Resident Engineer**, or any other officer, 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 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 hours in duration.

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.

36.1.5 The aforesaid provisions of this article covering every **Contract** for or on behalf of the State or a municipality for the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the State of New York.

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 section 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 all information and reports including an Employment Report before the award of the **Contract** which are required by E.O. 50, the Rules and Regulations promulgated thereunder, and orders of the 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.

Failure to comply with E.O. 50 and the rules and regulations promulgated thereunder, in one or more instances, may result in the **Agency** declaring the **Contractor** to be non-responsible.

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 VIII of the Administrative Code;

36.5.2 every agreement between the **Contractor** and its **Subcontractors** in excess of \$50,000 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.); and

36.5.3 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 Section 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) calendar **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**. Minimum wages shall be the rates fixed by Federal **Law** and regulations.

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.

37.4 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 wage scale as provided in Labor Law Section 220, as amended, or

37.4.1(b) Less than 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) and Minimum Wages (Article 37.2.6), the party responsible therefore 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 suits brought by the Corporation Counsel in the name of the **City**, in addition to damage for any other breach of this **Contract**, 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 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 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, whether such failures were concurrent or consecutive and whether or not such final determinations concerning separate public work projects are rendered

simultaneously, such **Contractor** or **Subcontractor** shall be ineligible to submit a bid on or be awarded any public work 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 work 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 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 work 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 dollars, such notice shall also include a statement that, that each worker, laborer or mechanic 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 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, which signed statement shall be maintained with the payroll records required by this **Contract**; and

37.6.3.1 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:** Provide laminated identification badges which indicate the worker's, laborer's or mechanic's name, trade, employer's name and employment starting date (month/day/year). Further, 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**; 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 in Article 37.6.1 in that language or languages as may be required. The **Contractor** is responsible for all distributions under 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 If this **Contract** is for an amount greater than \$1,000,000, 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 \$750,000, 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** or **Subcontractor(s)** 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.

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 with the provisions of this article 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 for 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** shall maintain on the **Site** the original payrolls or transcripts thereof which the **Contractor** and its **Subcontractor(s)** are required to maintain pursuant to Labor Law Section 220. The **Contractor** and **Subcontractor(s)** shall submit original payrolls or transcripts, subscribed and affirmed by it as true, with each and every payment requisition. 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 original payrolls or transcripts thereof, subscribed and affirmed by it as true, and the statements signed by each worker pursuant to this Chapter VIII. In addition, the **Contractor** and **Subcontractor(s)** shall furnish to the **Engineer** upon written demand any other information to satisfy the **Engineer** that this Chapter VIII and the Labor Law, as to the hours of employment and rates of wages, are being observed. The **Contractor** shall maintain the payrolls or transcripts thereof for six (6) years from the date of completion of the **Work** on this **Contract**.

38.2 When directed by the **Engineer**, the **Contractor** or **Subcontractor** shall provide the **Engineer** with an attendance sheet for each **Day** on which **Work** is performed on the **Site**. Such attendance sheet shall be in a form acceptable to the **Agency** and shall provide information for employees of the **Contractor** and **Subcontractor(s)**.

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** void.

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 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, 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 a month, 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 such satisfactory payment application, 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 **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 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 section 43.5 herein, then the **Contractor** shall pay interest on amounts due to such **Subcontractor** or **Materialman** at a 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 NY General Business Law. Accrual of interest shall commence on the day immediately following the expiration of the seventh day following receipt of payment to the **Contractor** by 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 suppliers 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 When the **Work** in the opinion of the **Commissioner**, has been substantially but not entirely completed, he/she shall issue a certificate of **Substantial Completion**.

44.2 The **Contractor** shall submit with the **Substantial Completion** requisition:

44.2.1 A Final Verified Statement of any and all alleged claims against the **City** and any pending dispute resolution procedures in accord with the **PPB Rules** and this **Contract**, 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.

44.2.1(a) With respect to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the Corporation Counsel of the **City** 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 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, will have waived any such claims.

44.2.2 A **Final Approved Punch List**.

44.2.3 Where required, a request for a substantial or final extension of time.

44.3 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 where the **Contractor** shall fail to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

44.4 No further partial payments shall be made to the **Contractor** after the **Commissioner** issues a Certificate of **Substantial Completion**, except the **Substantial Completion** payment and **Contractor's** requisition that were properly filed with the **Commissioner** prior to the date of **Substantial Completion**; however, the **Commissioner** may grant a waiver for further partial payments after the date of **Substantial Completion** to permit payments for change order **Work** and/or release of retainage and deposits pursuant to Articles 21 and 24. Such waiver shall be in writing.

44.5 The **Contractor** acknowledges that nothing contained in this article 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. 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 and all alleged claims against the **City**, and any pending dispute resolution procedures in accord with the **PPB Rules** and this **Contract**, 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 Corporation Counsel of the **City** 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, is entitled 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 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 to 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 officers, 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, or those for amounts deducted by the **Commissioner** from the final requisition or by the **Comptroller** 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 officer, 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 from commencing an action for breach of **Contract** under this provision to the extent permitted by **Law** and by the terms of the **Contract** 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 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 the 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.

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 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 a lawsuit 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 provision 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 complete 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 previous provisions of this Chapter X shall be in addition to any and all other legal or equitable remedies permissible in the premises.

54.3 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**.

54.4 The expense of such completion, 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**.

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 lawsuit, 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 lawsuit be instituted or maintained on any such claims unless such lawsuit is commenced within six (6) months after the date the **Commissioner** issues a Certificate of **Substantial Completion** pursuant to Article 44; except that:

56.2.1 Any claims arising out of events occurring after the date the **Commissioner** issues a Certificate of **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 becomes 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 lawsuit 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 indemnify the **City** against any and all claims and judgments for damages for any infringement of copyright and patents or use of patented articles, tools, materials, equipment, appliances or processes in the performance or completion of the **Work**, including all costs and expenses which the **City** shall or may incur or be obligated to pay by reason thereof.

ARTICLE 58. NO CLAIM AGAINST OFFICERS, AGENTS OR EMPLOYEES

58.1 No claim whatsoever shall be made by the **Contractor** against any officer, 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. SERVICES OF NOTICES

59.1 The **Contractor** hereby designates the business 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. Actual delivery of any such notice, direction or communication to the aforesaid place, or depositing it in a postpaid wrapper addressed thereto in any post office box (P.O. Box) regularly maintained by the United States Postal Service, shall be conclusively deemed to be sufficient service thereof upon the **Contractor** as the date of such delivery or deposit.

59.2 Such address 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, local taxes and Sales and Compensation Use Taxes of the State of New York and of cities and counties on all materials and supplies 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** or a **Subcontractor**, or to supplies and materials which even though they are consumed, are not incorporated into the completed **Work** (consumable supplies), and the **Contractor** and its **Subcontractors** shall be responsible for and pay any and all applicable taxes, including Sales and Compensation Use Taxes, on such leased tools, machinery, equipment or other property and upon all such unincorporated supplies and materials.

62.2 The **Contractor** agrees to sell and the **City** agrees to purchase all supplies and materials, other than consumable supplies, 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 supplies and materials shall be in full payment and consideration for the sale of such supplies and materials herein.

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, etc., 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** and labor.

62.3 The purchase by the **Contractor** of the supplies and materials sold hereunder shall be a purchase or procurement for resale and therefore not subject to the New York State or **City** Sales or Compensation Use Taxes or any such taxes of cities or counties. The sale of such supplies and materials by the **Contractor** to the **City** is exempt from the aforesaid sales or compensating use taxes. With respect to such supplies and materials, 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 supplies and materials, free of liens and/or encumbrances, and the **Contractor** shall mark or otherwise identify all such materials as the property of the **City**.

62.4 Title to all materials 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 supplies and materials to the **Site** and prior to its becoming a part of the permanent structure and/or construction. Notwithstanding such transfer of title, the **Contractor** shall have the full and continuing responsibility to install such materials and supplies in accordance with the provisions of this **Contract**, protect them, maintain them in a proper condition and forthwith repair, replace and make good any damage thereto, theft or disappearance thereof, and furnish additional materials 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 such supplies and materials are rejected as being defective or otherwise unsatisfactory, title to all such supplies and materials shall be deemed to have been transferred back to the **Contractor**.

62.5 The purchase by **Subcontractors** of supplies and materials to be sold hereunder shall also be a purchase or procurement for resale to the **Contractor** (either directly or through other **Subcontractors**) and therefore not subject to the aforesaid Sales or Compensation Use Taxes, provided that the subcontract agreements provide for the resale of such supplies and materials prior to and separate and apart from the incorporation of such supplies and materials into the permanent structure and/or construction and that such subcontract agreements are in a form similar to this **Contract** with respect to the separation of the sale of materials from the **Work** and labor, services, consumable supplies and any other matters to be provided, and provided further that the subcontract agreements provide separate prices for materials and all other services and matters. Such separation shall actually be followed in practice, including the separation of payments for supplies and materials from the payments for other **Work** and labor and other things to be provided.

62.6 The **Contractor** and its **Subcontractors** and Materialmen shall obtain any and all necessary **Contractor Exempt Purchase Certificates** or **Resale Certificates** from the appropriate governmental **Agency** or **Agencies**, and furnish a **Contractor Exempt Purchase Certificate** or **Resale Certificate** to all persons, firms or corporations from which they purchase supplies and materials for the performance of the **Work** covered by this **Contract**.

62.7 In the event any of the provisions of this article shall be deemed to be in conflict with any other provisions of this **Contract** or create any ambiguity, then the provisions of this article 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 **Agreement**, 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 herein 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 herein 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 herein 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 herein 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, 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 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 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, less salvage value, 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:

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, whichever is less, 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 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 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.

64.2.2 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 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 Material Contracts or Items: On all **Contracts** or items in a **Contract** where time and material records are specified as the basis for payment of the **Work**, 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 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 Cost shall not include overhead.

64.3 In no event shall any payments under this article exceed the **Contract** price for such items.

64.4 All payments pursuant to this article 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, 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 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** of New York, State of New York, 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 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 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 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 United States 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 State of New York, upon request of the **City**, the **Contractor** shall either consent to a transfer of the action to a State Court of competent jurisdiction located in the **City** and State 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 State Court of competent jurisdiction in the **City**.

65.3 If any provision(s) of this article 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 Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce 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, 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.

67.2 Unless specifically waived by the **Commissioner** with the approval of the Division of Economic and Financial Opportunity of the 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 enterprise ("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 prime **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 LBE's 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 **Contract**. Remedy for such breach of **Contract** may include the imposition of any or all of the following sanctions:

67.6.1 Reducing a **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 Where non-compliance is by an LBE, de-certifying and declaring the LBE 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 and rules, that it is in the best interest of the **City** that the **Contract** be awarded to other than the lowest responsible pursuant to Section 313(b)(2) of the **City Charter**.

69.1.4 In the case of **Contracts** let by other than competitive sealed bidding, if a prospective **Contractor** does not agree to these conditions, no **Agency**, elected official or the **City Council** shall award the **Contract** to that bidder unless the **Agency** seeking to use the goods, services or construction certifies in writing that the **Contract** is necessary for the **Agency** to perform its functions and there is no other responsible **Contractor** who will supply goods, services or construction of comparable quality at a comparable price.

69.2 In accordance with Section 6-115.1 of the Administrative Code, the **Contractor** stipulates that such **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** either:

69.2.1 Have no business operations in Northern Ireland, or

69.2.2 Shall take lawful steps in good faith to conduct any business operations they have in Northern Ireland in accordance with the MacBride Principles, and shall permit independent monitoring of their compliance with such principles.

69.3 For purposes of this Article, the following terms shall have the following meanings:

69.3.1 "MacBride Principles" shall mean those principles relating to nondiscrimination in employment and freedom of work-place opportunity which require employers doing business in Northern Ireland to:

69.3.1(a) increase the representation of individuals from under-represented religious groups in the workforce, including managerial, supervisory, administrative, clerical and technical jobs;

69.3.1(b) take steps to promote adequate security for the protection of employees from under-represented religious groups both at the work-place and while traveling to and from **Work**;

69.3.1(c) ban provocative religious or political emblems from the workplace;

69.3.1(d) publicly advertise all job openings and make special recruitment efforts to attract applicants from under-represented religious groups;

69.3.1(e) establish layoff, recall and termination procedures which do not in practice favor a particular religious group;

69.3.1(f) abolish all job reservations, apprenticeship restrictions and different employment criteria which discriminate on the basis of religion;

69.3.1(g) develop training programs that will prepare substantial numbers of current employees from under-represented religious groups for skilled jobs, including the expansion of existing programs and the creation of new programs to train, upgrade and improve the skills of workers from under-represented religious groups;

69.3.1(h) establish procedures to assess, identify and actively recruit employees from under-represented religious groups with potential for further advancement; and

69.3.1(i) appoint a senior management staff member to oversee affirmative action efforts and develop a timetable to ensure their full implementation.

69.4 The **Contractor** agrees that the covenants and representations in Article 69.2 are material conditions to this **Contract**. In the event the **Agency** receives information that the **Contractor** who made the stipulation required by this Article 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. HEALTH INSURANCE COVERAGE

70.1 If the price for which this **Contract** was awarded exceeds \$100,000, or if the price for which this **Contract** was awarded when combined with other construction or services contracts awarded the **Contractor** by the **City** in the year prior to award of this **Contract** exceeds \$100,000, the **Contractor**, following registration of the **Contract**, shall be required to submit responses to requests for information regarding the nature of any health

insurance provided by the Contractor to its employees and their spouses and domestic partners, upon request of the Agency or other designated City agency.

ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS

71.1 Tropical hardwoods, as defined in Section 165 of the New York State Finance Law ("Finance Law"), shall not be utilized in the performance of this Contract except as expressly permitted by Section 165 of the Finance Law.

ARTICLE 72. CONFLICTS OF INTEREST

72.1 Section 2604 of the City Charter and other related provisions of the City Charter, the Administrative Code and the Penal Law are applicable under the terms of this Contract in relation to Conflicts of Interest and shall be extended to Subcontractors authorized to perform Work, labor and services pursuant to this Contract and further, it shall be the duty and responsibility of the Contractor to so inform its respective Subcontractors. Notice is hereby given that, under certain circumstances, penalties may be invoked against the donor as well as the recipient of any form of valuable gift.

ARTICLE 73. MERGER CLAUSE

73.1 The Written Contract herein, contains all the terms and conditions agreed upon by the parties hereto, and no other agreement, oral or otherwise, regarding the subject matter of this Contract shall be deemed to exist or to bind any of the parties hereto, or to vary any of the terms contained herein.

ARTICLE 74. STATEMENT OF WORK

74.1 The Contractor shall furnish all labor and materials and perform all Work in strict accordance with the Specifications and Addenda thereto, numbered 7.

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: Ten Million three hundred Dollars, (\$10,371,035.27), 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. ↙
Seventy one thousand, thirty five dollars 27/100.00.

ARTICLE 76. ELECTRONIC FUNDS TRANSFER

76.1 In accordance with Section 6-107.1 of the New York City Administrative Code, the Contractor agrees to accept payments under this Agreement from the City by electronic funds transfer. An electronic funds transfer 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 Agreement, Contractor shall designate one financial institution or other authorized payment agent and shall complete the "EFT Vendor Payment Enrollment Form" (available at <http://www.nyc.gov/dof>) in order to provide the Commissioner of Finance with information necessary for Contractor to receive electronic funds transfer payments through the 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 agreement. 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 agency head may waive the application of the requirements herein to payments on contracts entered into pursuant to §315 of the City Charter. In addition, the Commissioner of the Department of Finance and the Comptroller may jointly issue standards pursuant to which the contracting agency may waive the requirements hereunder for payments in the following circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications or types of checks; or (iii) in other circumstances as may be necessary in the interest of the City.

ARTICLE 77 – 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 Section 6-129 to the Administrative Code of the City of New York. The local law creates a program for participation by minority-owned and women-owned business enterprises (MBEs and WBEs) in City procurement. As stated in the 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 made pursuant to Local Law 129, and the rules of the Department of Small Business Services ("DSBS") promulgated thereunder.

If this Contract is subject to the Minority-Owned and Women-Owned Business Enterprise ("M/WBE") program created by Local Law 129, the specific requirements of M/WBE participation for this Contract are set forth in Schedule B of the Contract (entitled the "Subcontractor Utilization Plan"), and are detailed below. The Contractor must comply with all applicable M/WBE requirements for this Contract. Schedule B of the Contract ("Subcontractor Utilization Plan") is included in the Bid Booklet.

Article I, Part A, below, sets forth provisions related to the participation goals for construction 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 AND PROFESSIONAL SERVICES CONTRACTS

1. The Target Subcontracting Percentage applicable to this Contract is set forth on Schedule B, Part I to this Contract (see Page 1, line (1)). The "Target Subcontracting Percentage" is the percentage of the total Contract which Agency anticipates that the prime contractor for this Contract would in the normal course of business award to one or more subcontractors for amounts under \$1 million for construction and professional services.

A prospective contractor may seek a full or partial pre-award waiver of the **Target Subcontracting Percentage** in accordance with Local Law 129 and Part A, Section 10 below. To apply for the a full or partial waiver of the **Target Subcontracting Percentage**, a prospective contractor must complete Part III (Page 4) of Schedule B, and must submit such request no later than seven (7) days prior to the date and time the bids or proposals are due, in writing to the Agency by e-mail at poped@ddc.nyc.gov or via facsimile at (718) 391-1885. Bidders/proposers who have submitted requests will receive a response by no later than two (2) calendar days prior to the date bids or proposals are due, provided, however, that if that date would fall on a weekend or holiday, a response will be provided by close-of-business on the business day before such weekend or holiday date.

2. The **Subcontractor Participation Goals** established for this Contract are set forth on Schedule B, Part I to this Contract (see Page 1, line (2) and/or line (3)). The **Subcontractor Participation Goals** represent a percentage of the total dollar value of all construction and/or professional services subcontracts under this Agreement for amounts under \$1 million.

3. If **Subcontractor Participation Goals** have been established for this Contract, Contractor agrees or shall agree as a material term of the Agreement that, with respect to the total amount of the Agreement to be awarded to one or more subcontractors pursuant to subcontracts for amounts under \$1 million, Contractor shall be subject to the **Subcontractor Participation Goals**, unless the goals are modified by Agency in accordance with Local Law 129 and Part A, Section 11 below.

4. If **Subcontractor 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, Part II Subcontractor Utilization Plan (see Page 2-3) indicating: (a) the percentage of work it intends to subcontract; (b) the percentage of work it intends to award to subcontractors for amounts under \$1 million; (c) in cases where the prospective contractor intends to award subcontracts for amounts under \$1 million, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs; and (d) the general time frames in which such work by MBEs and/or WBEs is scheduled to occur. In the event that this Subcontractor Utilization Plan indicates that the bidder or proposer, as applicable, does not intend to award the **Target Subcontracting Percentage**, 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 **Target Subcontracting Percentage** in accordance with Local Law 129 and Part A, Section 10 below.

THE BIDDER/PROPOSER MUST COMPLETE THE SUBCONTRACTOR UTILIZATION PLAN INCLUDED HEREIN (SCHEDULE B, PART II). SUBCONTRACTOR UTILIZATION PLANS WHICH DO NOT INCLUDE THE REQUIRED AFFIRMATIONS WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE TARGET SUBCONTRACTING PERCENTAGE IS GRANTED (SCHEDULE B PART III). IN THE EVENT THAT THE CITY DETERMINES THAT VENDOR HAS SUBMITTED A SUBCONTRACTOR UTILIZATION PLAN WHERE THE REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE PLAN ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE AFFIRMATION, THE VENDOR 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 PLAN 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 EMAILED OR FAXED (IF THE VENDOR HAS PROVIDED AN EMAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.

5. Where a Subcontractor 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 multi-year contracts, such list shall also be submitted every year thereafter. **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 Subcontractor Participation Goals established for this Contract by proposing one or more subcontractors that are M/WBEs for any portion of the Wicks trade work if the amount to be awarded to such M/WBE subcontractor is under**

\$1 million. 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. M/WBE firms must be certified by DSBS in order for the Contractor to credit such firms' participation toward the attainment of the M/WBE participation goals. Such certification must occur prior to the firms' commencement of work as subcontractors. A list of M/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.

7. Where a Subcontractor 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 paid to subcontractors (including subcontractors that are not MBEs or WBEs); the names, addresses and contact numbers of each MBE or WBE hired as a subcontractor pursuant to such plan as well as 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 paid to subcontractors (including subcontractors that are not MBEs or WBEs); 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 hired pursuant to such plan, 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 Subcontractor Utilization Plan, Agency shall take appropriate action, in accordance with Local Law 129 and Article II below, unless the Contractor has obtained a modification of its Subcontractor Utilization Plan in accordance with Local Law 129 and Part A, Section 11 below.

9. Where a Subcontractor Utilization Plan has been submitted, and the Contractor requests a change order the value of which exceeds 10 percent of the Agreement, Agency shall establish participation goals for the work to be performed pursuant to the change order.

10. **Pre-award waiver of Target Subcontracting Percentage.** Agency may grant a full or partial waiver of the **Target Subcontracting Percentage** to a bidder or proposer, as applicable, who demonstrates—before submission of the bid or proposal—that it has legitimate business reasons for proposing the level of subcontracting in its Subcontractor Utilization Plan. In making its determination, Agency shall consider factors that shall include, but not be limited to, whether the bidder or proposer, 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 for under one million dollars represented by the **Target Subcontracting Percentage**. In making such determination, Agency may consider whether the Subcontractor Utilization Plan is consistent with past subcontracting practices of the bidder or proposer, as applicable, and whether the bidder or proposer, as applicable, has made good faith efforts to identify portions of the Contract that it intends to subcontract.

11. **Modification of Subcontractor Utilization Plan.** A Contractor may request a modification of its Subcontractor Utilization Plan (**Subcontractor Participation Goals**) 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 Subcontractor Utilization Plan as part of its bid submission.** The Agency may grant a request for Modification of a Contractor's Subcontractor 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 **Subcontractor Participation Goals**. In making such determination, Agency shall consider evidence of the following efforts, as applicable, along with any other relevant factors:

- (a) 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;
- (b) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (c) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs and WBEs that their interest in the Contract was solicited;
- (d) 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 Subcontractor Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;
- (e) 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;
- (f) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts;
- (g) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;
- (h) 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.

12. If this Contract is for an indefinite quantity of construction or professional services or is a requirements type contract and the Contractor has submitted a Subcontractor Utilization Plan and has committed to subcontract work to MBEs and/or WBEs in order to meet the **Subcontractor Participation Goals**, the Contractor will not be deemed in violation of the M/WBE 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 **Subcontractor Participation Goals** have been established for 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 a Subcontractor 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 Subcontractor Utilization Plan.

2. Pursuant to DSBS rules, construction contracts that include a requirement for a Subcontractor Utilization Plan shall not be subject to the law governing Locally Based Enterprises set forth in Administrative Code Section 6-108.1.

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

4. Prospective contractors are encouraged to enter into joint ventures with MBEs and WBEs.

5. By submitting a bid or proposal the Contractor hereby acknowledges its understanding of the M/WBE requirements set forth herein and the pertinent provisions of Local Law 129 of 2005, and any rules promulgated thereunder, and if awarded this Contract, the Contractor hereby agrees to comply with the M/WBE requirements of

this Contract and pertinent provisions of Local Law 129 of 2005, 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 M/WBE's to meet the required **Subcontractor 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 Subcontractor Utilization Plan, Agency shall send a written notice to the Contractor describing the alleged noncompliance and offering 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 this Section 6-129, including, but not limited any Subcontractor 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) assess liquidated damages or reduction of fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the program established by Section 6-129, 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) exercise 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) take any other appropriate remedy.
4. If a Subcontractor Utilization Plan has been submitted, and pursuant to this Article II, Section 3, the Contractor has been found to have failed to award subcontracts to MBEs and/or WBEs sufficient to meet the Subcontractor Participation Goals contained in its Subcontractor Utilization Plan or the Subcontractor 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 subcontracts required to be awarded to MBE and/or WBE subcontractors to meet the Subcontractor Participation Goals and the dollar amount the Contractor actually awarded and paid to MBE and/or WBE subcontractors. In view of the difficulty of accurately ascertaining the loss which the City will suffer by reason of Contractor's failure to meet the Subcontractor 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 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), 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 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 Subcontractor Utilization Plan shall be a factor in the evaluation of its performance. Whenever a contracting agency determines that a contractor's compliance with a Subcontractor Utilization Plan has been unsatisfactory, the agency shall, after consultation with the city chief procurement officer, file an advice of caution form for inclusion in VENDEX as caution data.

Deputy
1

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: [Signature]
Deputy Commissioner

CONTRACTOR:

By: [Signature]
(Member of Firm or Officer of Corporation)

Title: PARS

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

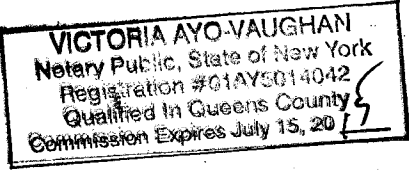
[Signature]
Secretary

(Seal)

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:

On this 2 day of Dec, 2013, before me personally came Carlo Carr to me known who, being by me duly sworn did depose and say that he resides at 45 Winchester Oval New Rochelle Ny 10805 that he is the pres 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.



[Signature]
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:

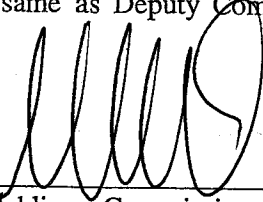
On this ____ day of _____, _____, before me personally appeared _____ to me known, and known to me to be the person described in and who executed the foregoing instrument; and acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

ACKNOWLEDGEMENT BY COMMISSIONER

State of New York County of Queens ss:

On this 3rd day of Dec, 2013, before me personally came Eric Maefarlane 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

Ten Million three hundred Seventy one
thousand thirty five dollars 27/100.

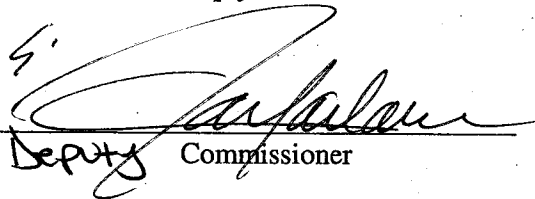
Dollars (\$ 10,371,035.27)

is chargeable to the fund of the Department of Design and Construction entitled Code

HWPL2004M

Department of Design and Construction

I hereby certify that the specifications contained herein comply with the terms and conditions of the BUDGET.

4

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

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

Performance Bond #2 (Pages 82 to 85): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 1)

PERFORMANCE BOND #2 Bond No. 015-040-367

KNOW ALL PERSONS BY THESE PRESENTS;

That we, Triumph Construction Corp.

hereinafter referred to as the "Principal,"

and, Liberty Mutual Insurance Company

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 Ten Million Three Hundred Seventy One Thousand Thirty Five and 27/100

(\$ 10,371,035.27) 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 Reconstruction of Pershing Square West at Park Avenue West from 40th Street to 42nd Street, Borough of Manhattan FMS ID: HWPLZ004M PIN: 8502013HW0043C

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 82 to 85): 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 82 to 85): 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

21st day of November 20 13

(Seal) Triumph Construction Corp. (L.S.)
Principal

(Seal) By: 

Liberty Mutual Insurance Company
Surety

(Seal) By: 
Francesca P. McAllan, Attorney in Fact

(Seal) Surety

(Seal) By: _____

(Seal) Surety

(Seal) By: _____

(Seal) Surety

(Seal) By: _____

(Seal) Surety

(Seal) By: _____

Bond Premium Rate \$17.00/\$10.00/\$7.50/\$7.00/\$6.50

Bond Premium Cost \$83,412

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 82 to 85): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL IF A CORPORATION

State of New York County of Westchester ss:

On this 21st day of NOVEMBER, 2013 before me personally

came Carlo Carrisi to me known, who, being by me duly sworn did depose and say that he resides

at 45 W. Westchester Ave. New Rochelle, NY; that he/she is the PRES of the corporation described in and which executed the foregoing instrument; that he/she signed his/her name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.

NOTARY PUBLIC - STATE OF NEW YORK

No. 01JA6078625

Notary Public or Commissioner of Deeds Qualified in Westchester County

My Commission Expires August 05, 2014

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.

SURETY ACKNOWLEDGMENT

State of New Jersey

County of Union

On this 21st day of November, 2013

Before me personally came Francesca P. McAllan to me known, who being by me duly sworn, did depose and say that he/she is an Attorney-in-Fact of Liberty Mutual Insurance Company the corporation described in and which executed the within instrument; that he/she knows the corporate seal of said corporation; that the seal affixed to the within instrument is such corporate seal, and that he/she signed the said instrument and affixed the said seal as Attorney-in-Fact by authority of the Board of Directors of said corporation and by authority of this office under the Standing Resolutions thereof.

My commission expires _____
SANDRA A. AMORY
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires
August 31, 2016



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. 5640305

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

Liberty Mutual Insurance Company
Peerless 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 Ohio, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, that Peerless Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, 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, Francesca P. McAllan; Lisa A. Anderson; Marc J. Michalewsky; Mary J. D'Amato; Sandra A. Amory; Sandra A. Pace; Thomas M. True

all of the city of Westfield, 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 6th day of November, 2012.



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

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

STATE OF WASHINGTON ss
COUNTY OF KING

On this 6th day of November, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, Peerless 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 Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, 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, West American Insurance Company and Peerless 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 Gregory W. Davenport, Assistant Secretary to appoint such attorney-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, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless 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 21st day of November, 20 13.



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

Not valid for mortgage, note, loan, letter of credit, bank deposit, bank deposit, currency rate, interest rate or 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, 2012

Assets		Liabilities	
Cash and Bank Deposits.....	\$ 903,711,694	Unearned Premiums.....	\$4,205,141,671
*Bonds — U.S Government.....	1,166,929,471	Reserve for Claims and Claims Expense	17,056,420,207
*Other Bonds.....	11,415,194,219	Funds Held Under Reinsurance Treaties.....	1,315,062,091
*Stocks.....	8,104,853,899	Reserve for Dividends to Policyholders.....	2,455,411
Real Estate.....	255,967,320	Additional Statutory Reserve.....	49,768,998
Agents' Balances or Uncollected Premiums.....	3,482,069,753	Reserve for Commissions, Taxes and	
Accrued Interest and Rents.....	144,016,763	Other Liabilities	<u>3,066,051,537</u>
Other Admitted Assets.....	<u>14,732,623,458</u>	Total	<u>\$25,694,899,915</u>
Total Admitted Assets.....	<u>\$40,205,366,577</u>	Special Surplus Funds.....	\$604,621,497
		Capital Stock.....	10,000,000
		Paid in Surplus.....	7,899,471,886
		Unassigned Surplus.....	5,996,373,279
		Surplus to Policyholders.....	<u>14,510,466,662</u>
		Total Liabilities and Surplus.....	<u>\$40,205,366,577</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, 2012, 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 25th day of March, 2013.

TAMikolajewski

Assistant Secretary

Payment Bond (Pages 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 1)

PAYMENT BOND

Bond No. 015-040-367

KNOW ALL PERSONS BY THESE PRESENTS, That we, Triumph Construction Corp.

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

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

Ten Million Three Hundred Seventy One Thousand Thirty Five and 27/100

10,371,035.27
(\$ _____) 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 Reconstruction of Pershing Square West at Park Avenue West from 40th Street to 42nd Street, Borough of Manhattan FMS IS: HWPL2004M PIN: 8502013HW0043C

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 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 2)

of the Project regardless of any contractual relationship between the Principal or such Subcontractors, or his or their successors or assigns, on the one hand and such laborers or mechanics on the other, but not including office employees not regularly stationed at the site of the project; and

(b) Materials and supplies (whether incorporated in the permanent structure or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any subcontractor at or in the vicinity of the site of the Project in the prosecution of the Work under said Contract and any amendment or extension thereof or addition thereto; then this obligation shall be void, otherwise to remain in full force and effect.

This bond is subject to the following additional conditions, limitations and agreements:

(a) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialmen or laborer having a just claim, as well as the City itself.

(b) All persons who have performed labor, rendered services or furnished materials and supplies, as aforesaid, shall have a direct right of action against the Principal and his, its or their successors and assigns, and the Surety (Sureties) herein, or against either or both or any of them and their successors and assigns. Such persons may sue in their own name, and may prosecute the suit to judgment and execution without the necessity of joining with any other persons as party plaintiff.

(c) The Principal and Surety (Sureties) agree that neither of them will hold the City liable for any judgment for costs of otherwise, obtained by either or both of them against a laborer or materialman in a suit brought by either a laborer or materialman under this bond for moneys allegedly due for performing work or furnishing material.

(d) The Surety (Sureties) or its successors and assigns shall not be liable for any compensation recoverable by an employee or laborer under the Workmen's Compensation Law.

(e) In no event shall the Surety (Sureties), or its successors or assigns, be liable for a greater sum than the penalty of this bond or be subject to any suit, action or proceeding hereon that is instituted by any person, firm, or corporation hereunder later than two years after the complete performance of said Contract and final settlement thereof.

The Principal, for himself and his successors and assigns, and the Surety (Sureties), for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the City to require a bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm or corporation, including subcontractors, materialmen and third persons, for work, labor, services, supplies or material performed rendered, or furnished as aforesaid upon the ground that there is no law authorizing the City to require the foregoing provisions to be placed in this bond.

And the Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties), and its bonds shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed, or any moneys due to become due thereunder and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, Subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done or in relation to said Principal.

Payment Bond (Pages 86 to 89): 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 21st day of November, 2013.

(Seal) Triumph Construction Corp. (L.S.)
Principal
By: [Signature]

(Seal) Liberty Mutual Insurance Company
Surety
By: [Signature]
Francesca P. McAllan, 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 86 to 89): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Westchester ss:

On this 21 day of Nov, 2013, before me personally came Carlo Cruz to me known, who, being by me duly sworn did depose and say that he resides at 45 W. 24th St. Valhalla, NY that he is the Pres 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.

SHIRLEY JACOBS

NOTARY PUBLIC-STATE OF NEW YORK

No. 01JA6078625

Qualified in Westchester County
Notary Public or Commissioner of Deeds
My Commission Expires August 05, 2014

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.

SURETY ACKNOWLEDGMENT

State of New Jersey

County of Union

On this 21st day of November, 2013

Before me personally came Francesca P. McAllan to me known, who
being by me duly sworn, did depose and say that he/she is an Attorney-in-Fact of

 Liberty Mutual Insurance Company the corporation described in and which
executed the within instrument; that he/she knows the corporate seal of said
corporation; that the seal affixed to the within instrument is such corporate seal, and that
he/she signed the said instrument and affixed the said seal as Attorney-in-Fact by
authority of the Board of Directors of said corporation and by authority of this office
under the Standing Resolutions thereof.

SANDRA A. AMORY
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires
August 31, 2016

My commission expires _____



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. 5640306

American Fire and Casualty Company
The Ohio Casualty Insurance Company
West American Insurance Company
Liberty Mutual Insurance Company
Peerless 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 Ohio, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, that Peerless Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, 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, Francesca P. McAllan; Lisa A. Anderson; Marc J. Michalewsky; Mary J. D'Amato; Sandra A. Amory; Sandra A. Pace; Thomas M. True

all of the city of Westfield, 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 6th day of November, 2012.



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

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

STATE OF WASHINGTON ss
COUNTY OF KING

On this 6th day of November, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, Peerless 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 Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, 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, West American Insurance Company and Peerless 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 Gregory W. Davenport, Assistant Secretary to appoint such attorney-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, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless 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 21st day of November, 20 13.



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

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or 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, 2012

Assets	Liabilities
Cash and Bank Deposits..... \$ 903,711,694	Unearned Premiums..... \$4,205,141,671
*Bonds — U.S Government..... 1,166,929,471	Reserve for Claims and Claims Expense 17,056,420,207
*Other Bonds..... 11,415,194,219	Funds Held Under Reinsurance Treaties..... 1,315,062,091
*Stocks..... 8,104,853,899	Reserve for Dividends to Policyholders..... 2,455,411
Real Estate..... 255,967,320	Additional Statutory Reserve..... 49,768,998
Agents' Balances or Uncollected Premiums..... 3,482,069,753	Reserve for Commissions, Taxes and
Accrued Interest and Rents..... 144,016,763	Other Liabilities <u>3,066,051,537</u>
Other Admitted Assets..... <u>14,732,623,458</u>	Total <u>\$25,694,899,915</u>
Total Admitted Assets <u>\$40,205,366,577</u>	Special Surplus Funds..... \$604,621,497
	Capital Stock..... 10,000,000
	Paid in Surplus..... 7,899,471,886
	Unassigned Surplus..... 5,996,373,279
	Surplus to Policyholders <u>14,510,466,662</u>
	Total Liabilities and Surplus <u>\$40,205,366,577</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, 2012, 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 25th day of March, 2013.

T. Mikolajewski

Assistant Secretary

<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. 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.

Pursuant to Labor Law §220 (3) 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.

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: Wasyi 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

Prevailing Rate Schedule Information: The information below is intended to assist you in meeting your prevailing wage rate obligation.

Covered Workers: Any and all individuals who are engaged, employed or otherwise occupied as Workers, Laborers or Mechanics on the public work site.

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 1, 2013 THROUGH JUNE 30, 2013

List of Amended Classifications

1. BOILERMAKER
2. CEMENT MASON
3. DERRICKPERSON AND RIGGER
4. DRIVER: TRUCK (TEAMSTER)
5. ENGINEER - FIELD (BUILDING CONSTRUCTION)
6. ENGINEER - OPERATING
7. HEAT AND FROST INSULATOR
8. HOUSE WRECKER
9. IRON WORKER - ORNAMENTAL
10. IRON WORKER - STRUCTURAL
11. MASON TENDER
12. MASON TENDER (INTERIOR DEMOLITION WORKER)
13. MOSAIC MECHANIC
14. PAPERHANGER
15. PLASTERER
16. PLASTERER - TENDER
17. PLUMBER
18. PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)
19. PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)
20. ROOFER

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

21. SHEET METAL WORKER

22. SIGN ERECTOR

23. STEAMFITTER

24. STEAMFITTER - REFRIGERATION AND AIR CONDITIONER

25. TILE FINISHER

26. TILE LAYER - SETTER

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

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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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$35.10**

Supplemental Benefit Rate per Hour: **\$14.85**

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)

BLASTER

Blaster

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$43.20**

Supplemental Benefit Rate per Hour: **\$37.29**

Blaster (Hydraulic)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$43.95**

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

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Trac Drill Hydraulic

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.96

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.24

Supplemental Benefit Rate per Hour: \$37.29

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.29

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Powder Carriers

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$33.73

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Hydraulic Trac Drill Chuck Tender

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$32.57

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Chuck Tender & Nipper

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$31.88

Supplemental Benefit Rate per Hour: \$37.29

Blaster - Magazine Keepers: (Watch Person)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$19.26

Supplemental Benefit Rate per Hour: \$37.29

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

Overtime Description

For Blaster - Magazine Keepers: (Watch Person) only - time and one half the regular rate for work after an 8 hour day, Saturday, Sunday and holidays listed below.

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$47.98**

Supplemental Benefit Rate per Hour: **\$37.88**

Supplemental Note: The above rate applies to repair or maintenance and new construction; For time and one half overtime - \$56.36; For double overtime - \$74.86.

Effective Period: 1/1/2013 - 3/31/2013

Wage Rate per Hour: **\$49.47**

Supplemental Benefit Rate per Hour: **\$39.48**

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

Supplemental Note: The above rate applies to repair or maintenance and new construction; For time and one half overtime - \$58.78; For double overtime - \$78.07.

Effective Period: 4/1/2013 - 6/30/2013

Wage Rate per Hour: \$49.47

Supplemental Benefit Rate per Hour: \$39.78

Supplemental Note: The above rate applies to repair or maintenance and new construction; For time and one half overtime - \$59.08; For double overtime - \$78.37.

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$46.44**

Supplemental Benefit Rate per Hour: **\$27.53**

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$46.15**

Supplemental Benefit Rate per Hour: **\$38.50**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

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

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$46.74

Supplemental Benefit Rate per Hour: \$42.37

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 10:00 P.M. shall work eight and one half hours allowing for one half hour for lunch, but will be paid for 9 hours including benefits at the straight time rate for 8 hours.

(Carpenters District Council)

CEMENT & CONCRETE WORKER

Cement & Concrete Worker

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$38.98**

Supplemental Benefit Rate per Hour: **\$25.67**

Supplemental Note: **\$28.42 on Saturdays; \$31.17 on Sundays & Holidays**

Overtime Description

Time and one half the regular rate after 7 hour day (time and one half the regular rate after an 8 hour day when working with Dockbuilders on pile cap forms and for work below street level to the top of the foundation wall, not to exceed 2 feet or 3 feet above the sidewalk-brick shelf, when working on the foundation and structure.)

Overtime

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

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

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$42.50**

Supplemental Benefit Rate per Hour: **\$39.06**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$57.56**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.63**

Supplemental Benefit Rate per Hour: **\$39.06**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$57.56**

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

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.

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

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.

(Local #780)

CORE DRILLER

Core Driller

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$35.44**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$28.60**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper(Third year in the industry)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$25.74**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper (Second year in the industry)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$22.88**

Supplemental Benefit Rate per Hour: **\$19.75**

Core Driller Helper (First year in the industry)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$20.02**

Supplemental Benefit Rate per Hour: **\$19.75**

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.

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

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$40.50**

Supplemental Benefit Rate per Hour: **\$42.07**

Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. \$43.49 - For work performed in Staten Island.

Effective Period: 1/1/2013 - 6/30/2013

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$30.00**

Supplemental Benefit Rate per Hour: **\$31.32**

Overtime Description

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$58.95

Supplemental Benefit Rate per Hour: \$42.37

Diver Tender (Marine)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$42.10

Supplemental Benefit Rate per Hour: \$42.37

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).

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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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$46.74**

Supplemental Benefit Rate per Hour: **\$42.37**

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

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None

Shift Rates

Off shift work, commencing between 5:00 P.M. and 10:00 P.M., shall work eight and one half hours allowing for one half hour for lunch but will be paid the straight time hourly wage for 9 hours and the straight time supplemental benefits for 8 hours.

(Carpenters District Council)

DRIVER: TRUCK (TEAMSTER)

Driver - Automobile Chauffeur (Dump Truck)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$35.84**

Supplemental Benefit Rate per Hour: **\$36.93**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.01**

Supplemental Benefit Rate per Hour: **\$38.65**

Driver - Heavy Equipment Trailer Driver

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$37.34**

Supplemental Benefit Rate per Hour: **\$36.93**

Note: For time and one half overtime Wage Rate - \$53.76; for double time overtime Wage Rate - \$71.68

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$38.51**

Supplemental Benefit Rate per Hour: **\$38.65**

Note: For time and one half overtime Wage Rate - \$55.51; for double time overtime Wage Rate - \$74.01

Driver - Euclid & Turnpull Operator

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$36.41**

Supplemental Benefit Rate per Hour: **\$36.93**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.57**

Supplemental Benefit Rate per Hour: **\$38.65**

Driver - Six Wheeler(3 Axle) Tractors & Trailers

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Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$36.84

Supplemental Benefit Rate per Hour: \$36.93

Note: For time and one half overtime Wage Rate - \$54.62; for double time overtime Wage Rate - \$72.82

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$38.01

Supplemental Benefit Rate per Hour: \$38.65

Note: For time and one half overtime Wage Rate - \$56.36; for double time overtime Wage Rate - \$75.14

Driver - Boom Truck

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$37.09

Supplemental Benefit Rate per Hour: \$36.93

Note: For time and one half overtime Wage Rate - \$54.62; for double time overtime Wage Rate - \$72.82

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$38.26

Supplemental Benefit Rate per Hour: \$38.65

Note: For time and one half overtime Wage Rate - \$56.36; for double time overtime Wage Rate - \$75.14

Overtime Description

For Paid Holidays: Holiday pay for all holidays shall be prorated based two hours per day for each day worked in the holiday week, not to exceed 8 hours of holiday pay. For Thanksgiving week, the prorated share shall be 5 1/3 hours of holiday pay for each day worked in Thanksgiving week.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

President's Day

Columbus Day

Veteran's Day

Day after Thanksgiving

Triple time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

New Year's Day

President's Day

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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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$37.47**

Supplemental Benefit Rate per Hour: **\$38.65**

Overtime Description

For Paid Holidays: Employees working two (2) days in the calendar week in which the holiday falls are to be paid for these holidays, provided they shape each remaining workday during that calendar week.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

President's Day

Columbus Day

Veteran's Day

Triple time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

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(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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.00

Supplemental Benefit Rate per Hour: \$42.45

Electrician "A" (Regular Day Overtime)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$76.50

Supplemental Benefit Rate per Hour: \$45.13

Electrician "A" (Day Shift)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.00

Supplemental Benefit Rate per Hour: \$42.45

Electrician "A" (Day Shift Overtime After 8 hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$76.50

Supplemental Benefit Rate per Hour: \$45.13

Electrician "A" (Swing Shift)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$59.84

Supplemental Benefit Rate per Hour: \$48.20

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

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$89.76

Supplemental Benefit Rate per Hour: \$51.36

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Electrician "A" (Graveyard Shift)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$67.03

Supplemental Benefit Rate per Hour: \$53.07

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

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$100.55

Supplemental Benefit Rate per Hour: \$56.60

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.

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,

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maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$25.30

Supplemental Benefit Rate per Hour: \$17.52

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.95

Supplemental Benefit Rate per Hour: \$18.85

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

(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)

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Alarm Technician

Effective Period: 7/1/2012 - 3/9/2013

Wage Rate per Hour: \$29.90

Supplemental Benefit Rate per Hour: \$13.70

Supplemental Note: \$12.20 only after 8 hours worked in a day

Effective Period: 3/10/2013 - 6/30/2013

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

Plus one Personal Day per year

Sick Days:

One day per Year

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(Local #3)

ELECTRICIAN-STREET LIGHTING WORKER

Electrician - Electro Pole Electrician

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.00

Supplemental Benefit Rate per Hour: \$44.18

Electrician - Electro Pole Foundation Installer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.66

Supplemental Benefit Rate per Hour: \$34.12

Electrician - Electro Pole Maintainer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$33.10

Supplemental Benefit Rate per Hour: \$30.84

Overtime Description

Electrician - Electro Pole Electrician: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week.

Electrician - Electro Pole Foundation Installer: Time and one half the regular rate after 8 hours within a 24 hour period and Saturday and Sunday.

Electrician - Electro Pole Maintainer: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week. Saturdays and Sundays may be used as a make-up day at straight time when a day is lost during the week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

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(Local #3)

ELEVATOR CONSTRUCTOR

Elevator Constructor

Effective Period: 7/1/2012 - 3/16/2013

Wage Rate per Hour: \$55.20

Supplemental Benefit Rate per Hour: \$32.78

Effective Period: 3/17/2013 - 6/30/2013

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

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: 7/1/2012 - 3/16/2013

Wage Rate per Hour: \$43.79

Supplemental Benefit Rate per Hour: \$31.37

Effective Period: 3/17/2013 - 6/30/2013

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

Engineer - Heavy Construction Operating Engineer I

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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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$58.75

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$94.00

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$57.00

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$91.20

Engineer - Heavy Construction Maintenance Engineer I

Installing, Repairing, Maintaining, Dismantling and Manning of all equipment including Steel Cutting, Bending and Heat Sealing Machines, Mechanical Heaters, Grout Pumps, Bentonite Pumps & Plants, Screening Machines, Fusion Coupling Machines, Tunnel Boring Machines Moles and Machines of a similar nature, Power Packs, Mechanical Hydraulic Jacks; all drill rigs including but not limited to Churn, Rotary Caisson, Raised Bore & Drills of a similar nature; Personnel, Inspection & Safety Boats or any boats used to perform functions of same, Mine Hoists, Whirlies, all Climbing Cranes, all Tower Cranes, including but not limited to Truck Mounted and Crawler Type and machines of similar nature; Maintaining Hydraulic Drills and machines of a similar nature; Well Point System-Installation and dismantling; Burning, Welding, all Pumps regardless of size and/or motor power, except River Cofferdam Pumps and Wells Point Pumps; Motorized Buggies (three or more); equipment used in the cleaning and televising of sewers, but not limited to jet-rodder/vacuum truck, vacall/vactor, closed circuit television inspection equipment; high powered water pumps, jet pumps; screed machines and concrete finishing machines of a similar nature; vermeers.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$56.74

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$90.78

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Engineer - Heavy Construction Maintenance Engineer II

On Base Mounted Tower Cranes

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$74.44

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$119.10

Engineer - Heavy Construction Maintenance Engineer III

On Generators, Light Towers

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.56

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$60.10

Engineer - Heavy Construction Maintenance Engineer IV

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$38.53

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$61.65

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$54.09

Supplemental Benefit Rate per Hour: \$31.07

Supplemental Note: \$55.74 on overtime

Shift Wage Rate: \$86.54

Engineer - Heavy Construction Oilers I

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

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.19

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Supplemental Benefit Rate per Hour: \$31.07
Supplemental Note: \$55.74 on overtime
Shift Wage Rate: \$81.90

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: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$35.50
Supplemental Benefit Rate per Hour: \$31.07
Supplemental Note: \$55.74 on overtime
Shift Wage Rate: \$56.80

Engineer - Steel Erection Maintenance Engineers

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$54.33
Supplemental Benefit Rate per Hour: \$29.66
Supplemental Note: \$53.17 on overtime
Shift Wage Rate: \$86.93

Engineer - Steel Erection Oiler I

On a Truck Crane

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$50.91
Supplemental Benefit Rate per Hour: \$29.66
Supplemental Note: \$53.17 on overtime
Shift Wage Rate: \$81.46

Engineer - Steel Erection Oiler II

On a Crawler Crane

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$39.04
Supplemental Benefit Rate per Hour: \$29.66
Supplemental Note: \$53.17 on overtime
Shift Wage Rate: \$62.46

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.

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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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$51.62

Supplemental Benefit Rate per Hour: \$29.66

Supplemental Note: \$53.17 on overtime

Engineer - Building Work Maintenance Engineers II

On Pumps, Generators, Mixers and Heaters

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$40.34

Supplemental Benefit Rate per Hour: \$29.66

Supplemental Note: \$53.17 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

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

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$49.12

Supplemental Benefit Rate per Hour: \$29.66

Supplemental Note: \$53.17 on overtime

Engineer - Building Work Oilers II

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$36.75

Supplemental Benefit Rate per Hour: \$29.66

Supplemental Note: \$53.17 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)

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ENGINEER - CITY SURVEYOR AND CONSULTANT

Party Chief

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$34.61**

Supplemental Benefit Rate per Hour: **\$17.30**

Instrument Person

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$28.59**

Supplemental Benefit Rate per Hour: **\$17.30**

Rodperson

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$24.79**

Supplemental Benefit Rate per Hour: **\$17.30**

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.)

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

Field Engineer - BC Party Chief

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$53.64**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime Benefit Rate - \$37.48 per hour (time & one half) \$48.00 per hour (double time).

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$55.74**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime Benefit Rate - \$41.40 per hour (time & one half) \$53.06 per hour (double time).

Field Engineer - BC Instrument Person

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$41.94**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime Benefit Rate - \$37.48 per hour (time & one half) \$48.00 per hour (double time).

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$43.30**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime Benefit Rate - \$41.40 per hour (time & one half) \$53.06 per hour (double time).

Field Engineer - BC Rodperson

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$27.52**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime Benefit Rate - \$37.48 per hour (time & one half) \$48.00 per hour (double time).

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$27.97**

Supplemental Benefit Rate per Hour: **\$29.73**

Supplemental Note: Overtime Benefit Rate - \$41.40 per hour (time & one half) \$53.06 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

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$60.28

Supplemental Benefit Rate per Hour: \$29.73

Supplemental Note: Overtime benefit rate - \$41.40 per hour (time & one half), \$53.06 per hour (double time).

Field Engineer - HC Instrument Person

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$44.28

Supplemental Benefit Rate per Hour: \$29.73

Supplemental Note: Overtime benefit rate - \$41.40 per hour (time & one half), \$53.06 per hour (double time).

Field Engineer - HC Rodperson

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.11

Supplemental Benefit Rate per Hour: \$29.73

Supplemental Note: Overtime benefit rate - \$41.40 per hour (time & one half), \$53.06 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

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$54.50**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime benefit rate - \$37.48 per hour (time & one half), \$48.00 per hour (double time).

Field Engineer - Steel Erection Instrument Person

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$42.63**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime benefit rate - \$37.48 per hour (time & one half), \$48.00 per hour (double time).

Field Engineer - Steel Erection Rodperson

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$28.84**

Supplemental Benefit Rate per Hour: **\$26.95**

Supplemental Note: Overtime benefit rate - \$37.48 per hour (time & one half), \$48.00 per hour (double time).

Overtime Description

Time and one half the regular rate for Saturday for the first eight hours worked.

Double time the regular rate for Saturday for work performed in excess of eight hours.

Overtime

Time and one half the regular rate after an 8 hour day.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$64.38**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$103.01**

Operating Engineer - Road & Heavy Construction II

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$66.70**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **51.85** overtime hours

Shift Wage Rate: **\$106.72**

Operating Engineer - Road & Heavy Construction III

Mine Hoists, Cranes, etc. (Used as Mine Hoists)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$68.86**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$110.18**

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$67.21**

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

Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$107.54

Operating Engineer - Road & Heavy Construction V

Pile Drivers & Rigs (employing Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$65.86
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$105.38

Operating Engineer - Road & Heavy Construction VI

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$62.51
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$100.02

Operating Engineer - Road & Heavy Construction VII

Barrier Movers , Barrier Transport and Machines of a Similar Nature.

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$50.27
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$80.43

Operating Engineer - Road & Heavy Construction VIII

Utility Compressors

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$36.37
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$46.38

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$38.78
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

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

Shift Wage Rate: \$49.16

Operating Engineer - Road & Heavy Construction IX

Horizontal Boring Rig

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$56.24

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$89.98

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$59.39

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$95.02

Operating Engineer - Road & Heavy Construction X

Elevators (manually operated as personnel hoist).

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$54.50

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$87.20

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$42.11

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$67.38

Operating Engineer - Road & Heavy Construction XII

All Drills and Machines of a similar nature.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$63.18

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$101.09

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

Operating Engineer - Road & Heavy Construction XIII

Concrete Pumps, Concrete Plant, Well Drilling Machines, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$61.14

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$97.82

Operating Engineer - Road & Heavy Construction XIV

Concrete Mixer

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$58.34

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$93.49

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$39.03

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$62.45

Operating Engineer - Road & Heavy Construction XVI

Concrete Breaking Machines, Single Drum Hoists, Locomotives (over ten tons) and Dinkies over ten tons, Hydraulic Crane-Second Engineer.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$55.73

Supplemental Benefit Rate per Hour: \$28.65

Supplemental Note: \$51.85 overtime hours

Shift Wage Rate: \$89.17

Operating Engineer - Road & Heavy Construction XVII

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

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

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$56.19
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$89.90

Operating Engineer - Road & Heavy Construction XVIII

Tower Crane

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$81.09
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$129.74

Operating Engineer - Paving I

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$59.25
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$94.80

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$62.51
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$100.02

Operating Engineer - Paving II

Asphalt Roller

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$57.65
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$92.24

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$60.85
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$97.36

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

Operating Engineer - Paving III

Asphalt Plants

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$48.46**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$77.54**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$51.32**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Shift Wage Rate: **\$82.11**

Operating Engineer - Concrete I

Cranes

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$63.49**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Operating Engineer - Concrete II

Compressors

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$36.91**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Operating Engineer - Concrete III

Micro-traps (Negative Air Machines), Vac-All Remediation System.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$50.31**

Supplemental Benefit Rate per Hour: **\$28.65**

Supplemental Note: **\$51.85** overtime hours

Operating Engineer - Steel Erection I

Three Drum Derricks

Effective Period: 7/1/2012 - 12/31/2012

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

Wage Rate per Hour: \$67.62
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$108.19

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$70.50
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$112.80

Operating Engineer - Steel Erection II

Cranes, 2 Drum Derricks, Hydraulic Cranes and Fork Lifts.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$64.91
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$103.86

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$67.71
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$108.34

Operating Engineer - Steel Erection III

Compressors, Welding Machines.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$37.87
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$60.59

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$39.86
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$63.78

Operating Engineer - Steel Erection IV

Compressors - Not Combined with Welding Machine.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$36.00

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

Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: **\$57.60**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$37.93**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: **\$60.69**

Operating Engineer - Building Work I

Forklifts, House Cars, Rack and Pinion, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$53.09**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$55.46**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work II

Compressors, Welding Machines (Cutting Concrete-Tank Work), Paint Spraying, Sandblasting, Pumps (with the exclusion of Concrete Pumps), House Car (settlement basis only), All Engines irrespective of Power (Power-Pac) used to drive Auxiliary Equipment, Air, Hydraulic, etc.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$39.35**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$41.32**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work III

Double Drum

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$60.66**
Supplemental Benefit Rate per Hour: **\$28.65**
Supplemental Note: \$51.85 overtime hours

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

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$63.25
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work IV

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$64.35
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$67.05
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work V

Dismantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$59.17
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$61.72
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

Operating Engineer - Building Work VI

4 Pole Hoist, Single Drum Hoists.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$58.53
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$61.06
Supplemental Benefit Rate per Hour: \$28.65
Supplemental Note: \$51.85 overtime hours

Overtime Description

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

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

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

Shifts may be worked at the single time rate at other than the regular working hours (8:00 A.M. to 4:30 P.M.) on the following work ONLY: Heavy construction jobs on work below the street level, over railroad tracks and on building jobs.

(Operating Engineer Local #14)

FLOOR COVERER

(Interior vinyl composition tile, sheath vinyl linoleum and wood parquet tile including site preparation and synthetic turf not including site preparation)

Floor Coverer

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$46.15
Supplemental Benefit Rate per Hour: \$38.50

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

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

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
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: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$40.00**

Supplemental Benefit Rate per Hour: **\$32.89**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$40.54**

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: **\$40.50**

Supplemental Benefit Rate per Hour: **\$33.24**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$41.24**

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.

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§220 PREVAILING WAGE SCHEDULE

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)

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: 7/1/2012 - 4/30/2013

Wage Rate per Hour: \$23.40

Supplemental Benefit Rate per Hour: \$18.04

Effective Period: 5/1/2013 - 6/30/2013

Wage Rate per Hour: \$23.50

Supplemental Benefit Rate per Hour: \$18.54

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

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: 7/1/2012 - 12/31/2012
Wage Rate per Hour: **\$54.28**
Supplemental Benefit Rate per Hour: **\$31.36**

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: **\$55.98**
Supplemental Benefit Rate per Hour: **\$32.36**

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

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

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.

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$33.00**

Supplemental Benefit Rate per Hour: **\$24.15**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$33.51**

Supplemental Benefit Rate per Hour: **\$24.64**

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$23.05**

Supplemental Benefit Rate per Hour: **\$17.85**

Effective Period: 1/1/2013 - 6/30/2013

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

Wage Rate per Hour: \$23.25

Supplemental Benefit Rate per Hour: \$18.35

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$41.50

Supplemental Benefit Rate per Hour: \$39.52

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$42.00

Supplemental Benefit Rate per Hour: \$42.89

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

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

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$45.05**

Supplemental Benefit Rate per Hour: **\$57.85**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$46.00**

Supplemental Benefit Rate per Hour: **\$61.23**

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.

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

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$38.70**

Supplemental Benefit Rate per Hour: **\$31.75**

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).

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$24.25

Supplemental Benefit Rate per Hour: \$12.30

Landscaper (3 - 6 years experience)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$23.25

Supplemental Benefit Rate per Hour: \$12.30

Landscaper (up to 3 years experience)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$20.75

Supplemental Benefit Rate per Hour: \$12.30

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

Groundperson

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$20.75
Supplemental Benefit Rate per Hour: \$12.30

Tree Remover / Pruner

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$29.25
Supplemental Benefit Rate per Hour: \$12.30

Landscaper Sprayer (Pesticide Applicator)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$19.25
Supplemental Benefit Rate per Hour: \$12.30

Watering - Plant Maintainer

Effective Period: 7/1/2012 - 6/30/2013
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
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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$49.19**

Supplemental Benefit Rate per Hour: **\$32.24**

Marble Finisher

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$39.05**

Supplemental Benefit Rate per Hour: **\$31.43**

Marble Polisher

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$34.73**

Supplemental Benefit Rate per Hour: **\$24.60**

Overtime Description

Supplemental Benefit contributions are to be made at the applicable overtime rates. Time and one half the regular rate after a 7 hour day or time and one half the regular rate after an 8 hour day - chosen by Employer at the start of the project and then would last for the full duration of the project.

Overtime

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

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

(Local #7)

MASON TENDER

Mason Tender

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$34.24**

Supplemental Benefit Rate per Hour: **\$24.40**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$34.50**

Supplemental Benefit Rate per Hour: **\$25.14**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

The Employer may work two (2) shifts with the first shift at the straight time wage rate and the second shift receiving eight (8) hours paid for seven (7) hours work at the straight time wage rate.

(Local #79)

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

MASON TENDER (INTERIOR DEMOLITION WORKER)

(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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$33.87**

Supplemental Benefit Rate per Hour: **\$19.22**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$34.07**

Supplemental Benefit Rate per Hour: **\$19.77**

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$23.07**

Supplemental Benefit Rate per Hour: **\$13.53**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$23.27**

Supplemental Benefit Rate per Hour: **\$14.08**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

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§220 PREVAILING WAGE SCHEDULE

(Local #79)

METALLIC LATHER

Metallic Lather

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$41.23**

Supplemental Benefit Rate per Hour: **\$38.35**

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.

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$46.19

Supplemental Benefit Rate per Hour: \$45.67

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.

(Local #740)

MOSAIC MECHANIC

Mosaic Mechanic - Mosaic & Terrazzo Mechanic

Effective Period: 7/1/2012 - 12/31/2012

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

Wage Rate per Hour: **\$43.93**

Supplemental Benefit Rate per Hour: **\$33.08**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$44.05 per hour.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$44.39**

Supplemental Benefit Rate per Hour: **\$35.12**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.09 per hour.

Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$42.36**

Supplemental Benefit Rate per Hour: **\$33.08**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$44.05 per hour.

Effective Period: 1/1/2013 - 6/30/2013

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.

Mosaic Mechanic - Machine Operator Grinder

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$42.36**

Supplemental Benefit Rate per Hour: **\$33.08**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$44.05 per hour.

Effective Period: 1/1/2013 - 6/30/2013

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.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Good Friday

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

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

Paid Holidays

None

(Local #7)

PAINTER

Painter - Brush & Roller

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$35.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: **\$29.75 on overtime**

Effective Period: 11/1/2012 - 4/30/2013

Wage Rate per Hour: **\$36.00**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: **\$29.75 on overtime**

Effective Period: 5/1/2013 - 6/30/2013

Wage Rate per Hour: **\$37.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: **\$29.75 on overtime**

Spray & Scaffold / Decorative / Sandblast

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$38.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: **\$29.75 on overtime**

Effective Period: 11/1/2012 - 4/30/2013

Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: **\$29.75 on overtime**

Effective Period: 5/1/2013 - 6/30/2013

Wage Rate per Hour: **\$40.50**

Supplemental Benefit Rate per Hour: **\$25.12**

Supplemental Note: **\$29.75 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.

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

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$36.15

Supplemental Benefit Rate per Hour: \$9.66

Journeyperson

Effective Period: 7/1/2012 - 6/30/2013

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

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

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.

(Local #8A-28A)

PAINTER - STRIPER

Striper (paint)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$33.00**

Supplemental Benefit Rate per Hour: **\$11.52**

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Lineperson (thermoplastic)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$37.00**

Supplemental Benefit Rate per Hour: **\$11.52**

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.

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

Vacation

Employees with one to two years service shall accrue vacation based on hours worked: 250 hours worked - 1 day vacation; 500 hours worked - 2 days vacation; 750 hours worked - 3 days vacation; 900 hours worked - 4 days vacation; 1,000 hours worked - 5 days vacation. Employees with two to five years service receive two weeks vacation. Employees with five to twenty years service receive three weeks vacation. Employees with twenty to twenty-five years service receive four weeks vacation. Employees with 25 or more years service receive five weeks vacation. Vacation must be taken during winter months. 2 Personal Days except employees hired after 4/1/12 who do not have 2 years of service.

(Local #917)

PAINTER - STRUCTURAL STEEL

Painters on Structural Steel

Effective Period: 7/1/2012 - 9/30/2012

Wage Rate per Hour: **\$46.25**

Supplemental Benefit Rate per Hour: **\$31.58**

Effective Period: 10/1/2012 - 6/30/2013

Wage Rate per Hour: **\$47.00**

Supplemental Benefit Rate per Hour: **\$32.08**

Painter - Power Tool

Effective Period: 7/1/2012 - 9/30/2012

Wage Rate per Hour: **\$52.25**

Supplemental Benefit Rate per Hour: **\$31.58**

Effective Period: 10/1/2012 - 6/30/2013

Wage Rate per Hour: **\$53.00**

Supplemental Benefit Rate per Hour: **\$32.08**

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

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

Paid Holidays

None

Shift Rates

Regular hourly rates plus a ten per cent (10%) differential

(Local #806)

PAPERHANGER

Paperhanger

Effective Period: 7/1/2012 - 4/30/2013

Wage Rate per Hour: **\$37.44**

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: 5/1/2013 - 6/30/2013

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.

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.

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

(District Council of Painters #9)

PAVER AND ROADBUILDER

Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$42.86**

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

Paver & Roadbuilder - Laborer

Paving and road construction work, regardless of material used, including but not limited to preparation of job sites, removal of old surfaces, asphalt and/or concrete, by whatever method, including but not limited to milling; laying of concrete; laying of asphalt for temporary, patchwork, and utility paving (but not production paving); site preparation and incidental work before the installation of rubberized materials and similar surfaces; installation and repair of temporary construction fencing; slurry seal coating, maintenance of safety surfaces; play equipment installation, and other related work.

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$38.99**

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$45.00**

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

Production Paver & Roadbuilder - Raker

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$44.49**

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$41.20**

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

Supplemental Benefit Rate per Hour: \$32.15

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 15%, except if an employee works on production paving on New Year's Day or Christmas Day, they receive the single time rate plus one day's pay for the holiday worked.

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

Independence Day

Labor Day

Columbus Day

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 fifteen percent (15%) over the single time rate, except that production paving work shall be paid at 25% over the single time rate. 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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$40.78

Supplemental Benefit Rate per Hour: \$26.80

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$40.78

Supplemental Benefit Rate per Hour: \$27.55

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.

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

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$34.24**

Supplemental Benefit Rate per Hour: **\$24.40**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$34.50**

Supplemental Benefit Rate per Hour: **\$25.14**

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

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

When work commences outside regular work hours, workers receive an hour additional (differential) wage and supplement payment. Eight hours pay for seven hours work or nine hours pay for eight hours work.

(Mason Tenders District Council)

PLUMBER

Plumber

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$51.76**

Supplemental Benefit Rate per Hour: **\$37.19**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$74.10**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$52.36**

Supplemental Benefit Rate per Hour: **\$37.34**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$74.40**

Overtime Description

Double time the regular rate after a 7 hour day - unless for new construction site work where the plumbing contract price is \$1 million or less, and for public works jobs where the plumbing contract 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

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

trades at the site are working an eighth hour at straight time, then the plumber shall also work an eighth hour at straight time.

Overtime

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Shift work, when directly specified in public agency or authority documents where plumbing contract is \$8 million or less, will be permitted. 30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday. 50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)

(Mechanical Equipment and Service work shall include any repair and/or replacement of the present plumbing system.)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$32.96

Supplemental Benefit Rate per Hour: \$15.93

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$33.21

Supplemental Benefit Rate per Hour: \$16.43

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

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

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$36.69

Supplemental Benefit Rate per Hour: \$25.46

Effective Period: 1/1/2013 - 6/30/2013.

Wage Rate per Hour: \$37.11

Supplemental Benefit Rate per Hour: \$25.56

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

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$52.31

Supplemental Benefit Rate per Hour: \$31.56

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular workday (8:00 A.M. to 3:30 P.M.) is to be paid at time and one half the regular hourly rate

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)

Pointer - Waterproofer, Caulker Mechanic

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$44.63**

Supplemental Benefit Rate per Hour: **\$23.10**

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)

ROOFER

Roofer

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$38.00**

Supplemental Benefit Rate per Hour: **\$27.07**

Effective Period: 1/1/2013 - 6/30/2013

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

Wage Rate per Hour: \$39.00

Supplemental Benefit Rate per Hour: \$27.37

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

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)

**SANDBLASTER - STEAMBLASTER
(Exterior Building Renovation)**

Sandblaster / Steamblaster

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$44.63

Supplemental Benefit Rate per Hour: \$23.10

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).

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

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$45.65**

Supplemental Benefit Rate per Hour: **\$40.50**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$45.65**

Supplemental Benefit Rate per Hour: **\$42.00**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Sheet Metal Worker - Duct Cleaner

Effective Period: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$36.52**

Supplemental Benefit Rate per Hour: **\$40.50**

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

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$36.52

Supplemental Benefit Rate per Hour: \$42.00

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

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 journey person engaged in fan maintenance shall work in excess of forty (40) hours in any work week.

(Local #28)

SHEET METAL WORKER - SPECIALTY (Decking & Siding)

Sheet Metal Specialty Worker

The first worker to perform this work must be paid at the rate of the Sheet Metal Worker. The second and third workers shall be paid the Specialty Worker Rate. The ratio of One Sheet Metal Worker, then Two Specialty Workers shall be utilized thereafter.

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

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$40.09

Supplemental Benefit Rate per Hour: \$22.06

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$41.55

Supplemental Benefit Rate per Hour: \$39.32

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$42.80

Supplemental Benefit Rate per Hour: \$42.17

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

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

Time and one half the regular rate for Sunday.

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$50.75**

Supplemental Benefit Rate per Hour: **\$49.68**

Supplemental Note: Overtime supplemental benefit rate: **\$98.62**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$51.25**

Supplemental Benefit Rate per Hour: **\$50.54**

Supplemental Note: Overtime supplemental benefit rate: **\$100.34**

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
Independence Day
Labor Day

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

Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

Shift Rates

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$50.75

Supplemental Benefit Rate per Hour: \$49.68

Supplemental Note: Overtime supplemental benefit rate: \$98.62

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$51.25

Supplemental Benefit Rate per Hour: \$50.54

Supplemental Note: Overtime supplemental benefit rate: \$100.34

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

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

None

Shift Rates

May be performed outside of the regular workday except Saturday, Sunday and Holidays. A shift shall consist of eight working hours. All work performed in excess of eight hours shall be paid at double time. No shift shall commence after 7:00 P.M. on Friday or 7:00 P.M. the day before holidays. All work performed after 12:01 A.M. Saturday or 12:01 A.M. the day before a Holiday will be paid at double time. When shift work is performed the wage rate for regular time worked is a thirty percent premium together with fringe benefits.

On Transit Authority projects, where work is performed in the vicinity of tracks all shift work on weekends and holidays may be performed at the regular shift rates.

Local #638

STEAMFITTER - REFRIGERATION AND AIR CONDITIONER (Maintenance and Installation Service Person)

Refrigeration and Air Conditioner Mechanic

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$36.30

Supplemental Benefit Rate per Hour: \$11.76

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$37.05

Supplemental Benefit Rate per Hour: \$12.26

Refrigeration and Air Conditioner Service Person V (4th year)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$29.82

Supplemental Benefit Rate per Hour: \$10.71

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$30.44

Supplemental Benefit Rate per Hour: \$11.13

Refrigeration and Air Conditioner Service Person IV (3rd year)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$24.71

Supplemental Benefit Rate per Hour: \$9.80

Effective Period: 1/1/2013 - 6/30/2013

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

Wage Rate per Hour: \$25.22
Supplemental Benefit Rate per Hour: \$10.16

Refrigeration and Air Conditioner Service Person III (2nd year)

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$21.21
Supplemental Benefit Rate per Hour: \$9.12

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$21.65
Supplemental Benefit Rate per Hour: \$9.44

Refrigeration and Air Conditioner Service Person II (2nd six months)

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$17.60
Supplemental Benefit Rate per Hour: \$8.50

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$17.96
Supplemental Benefit Rate per Hour: \$8.78

Refrigeration and Air Conditioner Service Person I (1st six months)

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$10.95
Supplemental Benefit Rate per Hour: \$7.90

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$11.18
Supplemental Benefit Rate per Hour: \$8.10

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

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
Independence Day
Labor Day
Veteran's Day
Thanksgiving Day
Christmas Day

Double time and one half the regular rate for work on the following holiday(s).

Martin Luther King Jr. Day
President's Day
Memorial Day
Columbus Day

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

(Local #638B)

STONE MASON - SETTER

Stone Mason - Setters

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$47.72**

Supplemental Benefit Rate per Hour: **\$35.28**

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

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

Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

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: 7/1/2012 - 12/25/2012

Wage Rate per Hour: **\$43.32**

Supplemental Benefit Rate per Hour: **\$21.66**

Effective Period: 12/26/2012 - 6/30/2013

Wage Rate per Hour: **\$43.82**

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.

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

Shift Rates

Time and one half the regular rate outside the regular work hours (8:00 A.M. through 3:30 P.M.)

(Local #1974)

**TELECOMMUNICATION WORKER
(Voice Installation Only)**

Telecommunication Worker

Effective Period: 7/1/2012 - 6/30/2013

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

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

Employees have the option of observing either Martin Luther King's Birthday or the day after Thanksgiving instead of Lincoln's Birthday

Shift Rates

For any workday that starts before 8A.M. or ends after 6P.M. there is a 10% differential for the applicable worker's hourly rate.

Vacation

After 6 months.....one week.
After 12 months but less than 7 years.....two weeks.
After 7 or more but less than 15 years.....three weeks.
After 15 years or more but less than 25 years.....four weeks.

(C.W.A.)

TILE FINISHER

Tile Finisher

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$38.17

Supplemental Benefit Rate per Hour: \$26.76

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$38.49

Supplemental Benefit Rate per Hour: \$27.42

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

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

Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

TILE LAYER - SETTER

Tile Layer - Setter

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$47.75

Supplemental Benefit Rate per Hour: \$30.83

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$48.55

Supplemental Benefit Rate per Hour: \$31.46

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$42.63

Supplemental Benefit Rate per Hour: \$41.99

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Off shift work, commencing between 5:00 P.M. and 10:00 P.M., shall work eight and one half hours but will be paid for 9 hours, including benefits at the straight time rate for 8 hours.

(Local #1536)

TUNNEL WORKER

Blasters, Mucking Machine Operators (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$52.00

Supplemental Benefit Rate per Hour: \$46.85

Tunnel Workers (Compressed Air Rates)

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

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$50.19
Supplemental Benefit Rate per Hour: \$45.29

Top Nipper (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$49.27
Supplemental Benefit Rate per Hour: \$44.51

Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$48.37
Supplemental Benefit Rate per Hour: \$43.67

Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$48.37
Supplemental Benefit Rate per Hour: \$43.67

Changehouse Attendant: Powder Watchperson (Compressed Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$42.09
Supplemental Benefit Rate per Hour: \$41.41

Blasters (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$49.62
Supplemental Benefit Rate per Hour: \$44.75

Tunnel Workers (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$47.48
Supplemental Benefit Rate per Hour: \$42.84

All Others (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$43.87
Supplemental Benefit Rate per Hour: \$39.62

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

Microtunneling (Free Air Rates)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.98

Supplemental Benefit Rate per Hour: \$34.27

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.

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.**

(NO TEXT ON THIS PAGE)

OFFICE OF THE COMPTROLLER

CITY OF NEW YORK

220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

APPENDIX

Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant and registered with the New York State Department of Labor, may be employed on a public work project.

Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the journey person wage rate for the classification of work he actually performed.

Apprentice ratios are established to ensure the proper safety, training and supervision of apprentices. A ratio establishes the number of journey workers required for each apprentice in a program and on a job site. Ratios are interpreted as follows: in the case of a 1:1, 1:4 ratio, there must be one journey worker for the first apprentice, and four additional journey workers for each subsequent apprentice.

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

APPRENTICESHIP SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS
ADDENDUM
EFFECTIVE PERIOD JANUARY 1, 2013 THROUGH JUNE 30, 2013

List of Amended Classifications

1. Boilermaker
2. House Wrecker
3. Iron Worker - Ornamental
4. Iron Worker - Structural
5. Mason Tender
6. Plasterer
7. Plumber

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ASBESTOS HANDLER

(Ratio of Apprentice Journeyperson: 1 to 1, 1 to 3)

Asbestos Handler (First 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 78% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$14.85

Asbestos Handler (Second 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$14.85

Asbestos Handler (Third 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 83% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$14.85

Asbestos Handler (Fourth 1000 Hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 89% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$14.85

(Local #78)

BOILERMAKER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Boilermaker (First Year)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$27.41

Effective Period: 1/1/2013 - 3/31/2013

Wage Rate Per Hour: 65% of Journeyperson's rate

Supplemental Benefit Rate Per Hour: \$28.45

Effective Period: 4/1/2013 - 6/30/2013

Wage Rate Per Hour: 65% of Journeyperson's rate

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

Supplemental Benefit Rate Per Hour: \$28.75

Boilermaker (Second Year: 1st Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$28.91

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$30.03

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$30.33

Boilermaker (Second Year: 2nd Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$30.40

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$31.61

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$31.91

Boilermaker (Third Year: 1st Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$31.89

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$33.19

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$33.49

Boilermaker (Third Year: 2nd Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 85% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$33.38

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 85% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$34.76

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

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 85% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$35.06

Boilermaker (Fourth Year: 1st Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$34.88

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$36.34

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$36.64

Boilermaker (Fourth Year: 2nd Six Months)

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$36.38

Effective Period: 1/1/2013 - 3/31/2013
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$37.90

Effective Period: 4/1/2013 - 6/30/2013
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$38.20

(Local #5)

BRICKLAYER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Bricklayer (First 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Second 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013

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

Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Third 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Fourth 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Fifth 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

Bricklayer (Sixth 750 Hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$16.60

(Bricklayer District Council)

CARPENTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Carpenter (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Carpenter (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Carpenter (Third Year)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$27.69

Carpenter (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$27.69

(Carpenters District Council)

CEMENT MASON
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Cement Mason (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's Rate

Cement Mason (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's Rate

Cement Mason (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 70% of Journeyperson's Rate

(Local #780)

CEMENT AND CONCRETE WORKER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Cement & Concrete Worker (0 - 500 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$17.54

Cement & Concrete Worker (501 - 1000 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$18.37

Cement & Concrete Worker (1001 - 2000 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$23.75

Cement & Concrete Worker (2001 - 4000 hours)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$24.57

(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: 7/1/2012 - 6/30/2013
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: 7/1/2012 - 6/30/2013
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: 7/1/2012 - 6/30/2013
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: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

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

(Local #197)

DOCKBUILDER/PILE DRIVER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

Dockbuilder/Pile Driver (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Dockbuilder/Pile Driver (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Dockbuilder/Pile Driver (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

Dockbuilder/Pile Driver (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Benefit Rate Per Hour: \$27.69

(Carpenters District Council)

ELECTRICIAN
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Electrician (First Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.25
Supplemental Benefit Rate per Hour: \$11.19
Overtime Wage Rate Per Hour: \$21.38

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Overtime Supplemental Rate Per Hour: \$11.96

Electrician (First Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$11.50

Supplemental Benefit Rate per Hour: \$9.86

Overtime Wage Rate Per Hour: \$17.25

Overtime Supplemental Rate Per Hour: \$10.48

Electrician (Second Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$17.05

Supplemental Benefit Rate per Hour: \$12.54

Overtime Wage Rate Per Hour: \$25.58

Overtime Supplemental Rate Per Hour: \$13.47

Electrician (Second Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$13.50

Supplemental Benefit Rate per Hour: \$10.83

Overtime Wage Rate Per Hour: \$20.25

Overtime Supplemental Rate Per Hour: \$11.56

Electrician (Third Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$19.15

Supplemental Benefit Rate per Hour: \$13.56

Overtime Wage Rate Per Hour: \$28.73

Overtime Supplemental Rate Per Hour: \$14.60

Electrician (Third Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$15.50

Supplemental Benefit Rate per Hour: \$11.79

Overtime Wage Rate Per Hour: \$23.25

Overtime Supplemental Rate Per Hour: \$12.63

Electrician (Fourth Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$21.10

Supplemental Benefit Rate per Hour: \$14.50

Overtime Wage Rate Per Hour: \$31.65

Overtime Supplemental Rate Per Hour: \$15.65

Electrician (Fourth Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$17.50
Supplemental Benefit Rate per Hour: \$12.76
Overtime Wage Rate Per Hour: \$26.25
Overtime Supplemental Rate Per Hour: \$13.71

Electrician (Fifth Year - Hired before 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$25.30
Supplemental Benefit Rate per Hour: \$17.52
Overtime Wage Rate Per Hour: \$37.95
Overtime Supplemental Rate Per Hour: \$18.85

Electrician (Fifth Year - Hired on or After 5/10/07)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$21.50
Supplemental Benefit Rate per Hour: \$15.71
Overtime Wage Rate Per Hour: \$32.25
Overtime Supplemental Rate Per Hour: \$16.84

Overtime Description

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)**

Elevator (Constructor) - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.40
Effective 3/17/2013 - Supplemental Rate Per Hour: \$26.87

Elevator (Constructor) - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$26.43
Effective 3/17/2013 - Supplemental Rate Per Hour: \$27.92

Elevator (Constructor) - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$27.84
Effective 3/17/2013 - Supplemental Rate Per Hour: \$29.38

Elevator (Constructor) - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: \$29.25
Effective 3/17/2013 - Supplemental Benefit 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: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Benefit Per Hour: \$25.33
Effective 3/17/2013 - Supplemental Benefit Per Hour: \$26.79

Elevator Service/Modernization Mechanic (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Benefit Per Hour: \$25.65
Effective 3/17/2013 - Supplemental Benefit Per Hour: \$27.12

Elevator Service/Modernization Mechanic (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Benefit Per Hour: \$26.92
Effective 3/17/2013 - Supplemental Benefit Per Hour: \$28.43

Elevator Service/Modernization Mechanic (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Per Hour: \$28.19

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Effective 3/17/2013 - 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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$21.64

Supplemental Benefit Rate per Hour: \$20.07

Engineer - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$27.05

Supplemental Benefit Rate per Hour: \$20.07

Engineer - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$29.75

Supplemental Benefit Rate per Hour: \$20.07

Engineer - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$32.45

Supplemental Benefit Rate per Hour: \$20.07

(Local #15)

ENGINEER - OPERATING

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

Operating Engineer - First Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour 40% of Journeyman's Rate

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Supplemental Benefit Per Hour: \$18.65

Operating Engineer - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's Rate
Supplemental Benefit Per Hour: \$18.65

Operating Engineer - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyperson's Rate
Supplemental Benefit Per Hour: \$18.65

(Local #14)

FLOOR COVERER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Floor Coverer (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75

Floor Coverer (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75

Floor Coverer (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75

Floor Coverer (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$25.75

(Carpenters District Council)

GLAZIER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Glazier (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$11.97

Glazier (Second Year)

Effective Period: 7/1/2012 - 10/31/2012
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$21.01

Effective Period: 11/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$21.13

Glazier (Third Year)

Effective Period: 7/1/2012 - 10/31/2012
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$23.38

Effective Period: 11/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$23.54

Glazier (Fourth Year)

Effective Period: 7/1/2012 - 10/31/2012
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$28.14

Effective Period: 11/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% 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)

Heat & Frost Insulator (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Heat & Frost Insulator (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Heat & Frost Insulator (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

Heat & Frost Insulator (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
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: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$20.06
Supplemental Benefit Rate per Hour: \$15.45

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$20.21
Supplemental Benefit Rate per Hour: \$15.80

House Wrecker - Second Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$21.06
Supplemental Benefit Rate per Hour: \$15.45

Effective Period: 1/1/2013 - 6/30/2013

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Wage Rate per Hour: \$21.26
Supplemental Benefit Rate per Hour: \$15.80

House Wrecker - Third Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$22.56
Supplemental Benefit Rate per Hour: \$15.45

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$22.81
Supplemental Benefit Rate per Hour: \$15.80

House Wrecker - Fourth Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$25.06
Supplemental Benefit Rate per Hour: \$15.45

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$25.36
Supplemental Benefit Rate per Hour: \$15.80

(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: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$32.06

Iron Worker (Ornamental) 5 - 10 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$32.89

Iron Worker (Ornamental) 11 - 16 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$33.73

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Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$34.34

Iron Worker (Ornamental) 17 - 22 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$35.39

Iron Worker (Ornamental) 23 - 28 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Rate Per Hour: \$36.22

Iron Worker (Ornamental) 29 - 36 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Rate Per Hour: \$37.89

Iron Worker (Ornamental) - 1st Ten Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.40

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$33.39

Iron Worker (Ornamental) - 11 - 16 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$31.23

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$34.34

Iron Worker (Ornamental) - 17 - 22 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$32.06

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$35.29

Iron Worker (Ornamental) - 23 - 28 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$33.73

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$37.19

Iron Worker (Ornamental) - 29 - 36 Months - Hired After 8/1/08

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$35.39

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$39.09

(Local #580)

**IRON WORKER - STRUCTURAL
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)**

Iron Worker (Structural) - 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$23.62
Supplemental Benefit Rate per Hour: \$41.21

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$24.10
Supplemental Benefit Rate per Hour: \$43.12

Iron Worker (Structural) - 7- 18 Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$24.22
Supplemental Benefit Rate per Hour: \$41.21

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$24.70
Supplemental Benefit Rate per Hour: \$43.12

Iron Worker (Structural) - 19 - 36 months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$24.82

Supplemental Benefit Rate per Hour: \$41.21

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$25.30

Supplemental Benefit Rate per Hour: \$43.12

(Local #40 and #361)

LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE LAYER & COMMON)

(Ratio Apprentice to Journeyman: 1 to 1, 1 to 3)

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - First 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Second 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 60% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Third 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 75% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Fourth 1000 hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 90% of Journeyman's rate

Supplemental Rate Per Hour: \$31.75

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(Local #731)

MARBLE MECHANICS

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cutters & Setters - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

Cutters & Setters - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

Cutters & Setters - Fourth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 75% of Journeyman's rate

Cutters & Setters - Fifth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 85% of Journeyman's rate

Cutters & Setters - Sixth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 95% of Journeyman's rate

Polishers & Finishers - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Polishers & Finishers - Second 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Polishers & Finishers - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Polishers & Finishers - Fourth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$20.33

Supplemental Benefit Rate per Hour: \$16.16

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$20.48

Supplemental Benefit Rate per Hour: \$16.51

Mason Tender - Second Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$21.33

Supplemental Benefit Rate per Hour: \$16.16

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$21.53

Supplemental Benefit Rate per Hour: \$16.51

Mason Tender - Third Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$22.83

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Supplemental Benefit Rate per Hour: \$16.16

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$23.08

Supplemental Benefit Rate per Hour: \$16.51

Mason Tender - Fourth Year

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$25.33

Supplemental Benefit Rate per Hour: \$16.16

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$25.63

Supplemental Benefit Rate per Hour: \$16.51

(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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$27.91

Supplemental Benefit Rate per Hour: \$22.79

Metallic Lather (Second Year - Called Prior to 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$32.51

Supplemental Benefit Rate per Hour: \$24.44

Metallic Lather (Third Year - Called Prior to 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$37.57

Supplemental Benefit Rate per Hour: \$25.59

Metallic Lather (First Year -Called On Or After 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$22.71
Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Third Year - Called On Or After 6/29/11)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$27.71
Supplemental Benefit Rate per Hour: \$19.85

(Local #46)

MILLWRIGHT

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Millwright (First Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$25.40
Supplemental Benefit Rate per Hour: \$28.67

Millwright (Second Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$30.02
Supplemental Benefit Rate per Hour: \$31.87

Millwright (Third Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$34.64
Supplemental Benefit Rate per Hour: \$36.19

Millwright (Fourth Year)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$43.88
Supplemental Benefit Rate per Hour: \$41.50

(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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$25.72

Supplemental Benefit Rate per Hour: \$15.75

Paver and Roadbuilder - Second Year (Minimum 1000 hours)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$27.29

Supplemental Benefit Rate per Hour: \$15.75

(Local #1010)

PAINTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painter - Brush & Roller - First Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: \$14.20

Supplemental Benefit Rate per Hour: \$10.88

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: \$14.40

Supplemental Benefit Rate per Hour: \$10.88

Painter - Brush & Roller - Second Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: \$17.75

Supplemental Benefit Rate per Hour: \$14.73

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: \$18.00

Supplemental Benefit Rate per Hour: \$14.73

Painter - Brush & Roller - Third Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$21.30**

Supplemental Benefit Rate per Hour: **\$17.64**

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: **\$21.60**

Supplemental Benefit Rate per Hour: **\$17.64**

Painter - Brush & Roller - Fourth Year

Effective Period: 7/1/2012 - 10/31/2012

Wage Rate per Hour: **\$28.40**

Supplemental Benefit Rate per Hour: **\$23.02**

Effective Period: 11/1/2012 - 6/30/2013

Wage Rate per Hour: **\$28.80**

Supplemental Benefit Rate per Hour: **\$23.02**

(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: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Painters - Structural Steel (Second Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Painters - Structural Steel (Third Year)

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #806)

PLASTERER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Plasterer - First Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$14.61

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$15.36

Plasterer - First Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$15.09

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$15.84

Plasterer - Second Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$17.06

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$17.81

Plasterer - Second Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$18.14

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$18.89

Plasterer - Third Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$20.31

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Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$21.06

Plasterer - Third Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$21.39

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$22.14

(Local #530)

PLUMBER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plumber - First Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$0.71

Plumber - First Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$2.96

Plumber - Second Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$17.96
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$18.26
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Third Year

Effective Period: 7/1/2012 - 12/31/2012

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Wage Rate per Hour: \$20.06
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$20.36
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Fourth Year

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$22.91
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$23.21
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Fifth Year: 1st Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$24.31
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$24.61
Supplemental Benefit Rate per Hour: \$16.32

Plumber - Fifth Year: 2nd Six Months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$36.38
Supplemental Benefit Rate per Hour: \$16.25

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$36.68
Supplemental Benefit Rate per Hour: \$16.32

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Pointer - Waterproofer, Caulker Mechanic - First Year

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Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$25.00
Supplemental Benefit Rate per Hour: \$3.45

Pointer - Waterproofer, Caulker Mechanic - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$27.25
Supplemental Benefit Rate per Hour: \$8.40

Pointer - Waterproofer, Caulker Mechanic - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$32.23
Supplemental Benefit Rate per Hour: \$11.15

Pointer - Waterproofer, Caulker Mechanic - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: \$38.66
Supplemental Benefit Rate per Hour: \$11.15

(Bricklayer District Council)

ROOFER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

Roofer - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 35% of Journeyman's Rate

Roofer - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Roofer - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Roofer - Fourth Year

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Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's Rate

(Local #8)

SHEET METAL WORKER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Sheet Metal Worker - First Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 30% of Journeyperson's rate

Supplemental Rate Per Hour: \$15.37

Sheet Metal Worker - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 35% of Journeyperson's rate

Supplemental Rate Per Hour: \$18.24

Sheet Metal Worker - Third Year (1st Six Months)

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$20.06

Sheet Metal Worker - Third Year (2nd Six Months)

Effective Period: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 55% of Journeyperson's rate

Supplemental Rate Per Hour: \$25.33

Sheet Metal Worker - Fifth Year (1st Six Months)

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Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$27.47

Sheet Metal Worker - Fifth Year(2nd Six Months)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$31.23

(Local #28)

SIGN ERECTOR
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Sign Erector - First Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 35% of Journeyman's rate
Supplemental Rate Per Hour: \$5.96

Sign Erector - First Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$6.75

Sign Erector - Second Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 45% of Journeyman's rate
Supplemental Rate Per Hour: \$7.55

Sign Erector - Second Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$8.34

Sign Erector - Third Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$9.13

Sign Erector - Third Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$9.92

Sign Erector - Fourth Year: 1st Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$10.72

Sign Erector - Fourth Year: 2nd Six Months

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$11.51

Sign Erector - Fifth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

Sign Erector - Sixth Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

(Local #137)

STEAMFITTER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Steamfitter - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate and Supplemental Per Hour: 40% of Journeyperson's rate

Steamfitter - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate and Supplemental Rate Per Hour: 50% of Journeyperson's rate.

Steamfitter - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate and Supplemental Rate per Hour: 65% of Journeyperson's rate.

Steamfitter - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate and Supplemental Rate Per Hour: 80% of Journeyperson's rate.

Steamfitter - Fifth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate and Supplemental Rate Per Hour: 85% of Journeyperson's rate.

(Local #638)

STONE MASON - SETTER

(Ratio Apprentice of Journeyperson: 1 to 1, 1 to 2)

Stone Mason - Setters - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Second 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 60% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 80% of Journeyperson's rate

Supplemental Rate Per Hour: 50% of Journeyperson's rate

Stone Mason - Setters - Fifth 750 Hours

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Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Sixth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate Per Hour: 100% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

(Bricklayers District Council)

TAPER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Drywall Taper - First Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Drywall Taper - Second Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Drywall Taper - Third Year

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #1974)

TILE LAYER - SETTER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Tile Layer - Setter - First 750 Hours

Effective Period: 7/1/2012 - 6/30/2013
Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

Tile Layer - Setter - Second 750 Hours

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

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Tile Layer - Setter - Third 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Tile Layer - Setter - Fourth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Tile Layer - Setter - Fifth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Tile Layer - Setter - Sixth 750 Hours

Effective Period: 7/1/2012 - 6/30/2013

Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

(Local #7)

TIMBERPERSON

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Timberperson - First Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 40% of Journeyperson's rate

Supplemental Rate Per Hour: \$27.49

Timberperson - Second Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 50% of Journeyperson's rate

Supplemental Rate Per Hour: \$27.49

Timberperson - Third Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 65% of Journeyperson's rate

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

Supplemental Rate Per Hour: \$27.49

Timberperson - Fourth Year

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate Per Hour: 80% of Journeyman's rate

Supplemental Rate Per Hour: \$27.49

(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.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE 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.

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

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OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

BUILDING CLEANER AND MAINTAINER (OFFICE)

Office Building Class "A" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 280,000 square feet gross area)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$22.65

Supplemental Benefit Rate per Hour: \$9.13

Supplemental Note: for new employee 0-12 months of employment - \$6.64; for new employee 13-24 months of employment - \$8.81

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$22.97

Supplemental Benefit Rate per Hour: \$9.51

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate. Note: New Hires hired before January 1, 2012 will continue to receive 80% of the wage rate above for the first 30 months, and upon the completion of 30 months of employment employee shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Office Building Class "B" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$22.62

Supplemental Benefit Rate per Hour: \$9.13

Supplemental Note: for new employee 0-12 months of employment - \$6.64; for new employee 13-24 months of employment - \$8.81

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$22.94

Supplemental Benefit Rate per Hour: \$9.51

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate. Note: New Hires hired before January 1, 2012 will continue to receive 80% of the wage rate above for the first 30 months, and upon the completion of 30 months of employment employee shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Office Building Class "C" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Less than 120,000 square feet gross area)

Effective Period: 7/1/2012 - 12/31/2012

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$22.57**

Supplemental Benefit Rate per Hour: **\$9.13**

Supplemental Note: for new employee 0-12 months of employment - \$6.64; for new employee 13-24 months of employment - \$8.81

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$22.90**

Supplemental Benefit Rate per Hour: **\$9.51**

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate. Note: New Hires hired before January 1, 2012 will continue to receive 80% of the wage rate above for the first 30 months, and upon the completion of 30 months of employment employee shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for work on a holiday plus the day's pay.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Vacation

Less than 6 months of work.....no vacation
6 months of work.....three (3) days
1 year of work.....ten (10) days
5 years of work.....fifteen (15) days
15 years of work.....twenty (20) days
21 years of work.....twenty-one (21) days
22 years of work.....twenty-two (22) days
23 years of work.....twenty-three (23) days
24 years of work.....twenty-four (24) days
25 years or more of work.....twenty-five (25) days
Plus two Personal Days per year.

Sick Leave:

10 sick days per year.

Unused sick leave paid in the succeeding January, one full day pay for each unused sick day.

(Local #32 B/J)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$6-109 PREVAILING WAGE SCHEDULE

BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)

Residential Building Class "A" Cleaner/Porter

Residential Buildings Class "A": buildings where the assessed value of the land and building, based upon the 1935 assessment, divided by the number of rooms in the building, gives an assessed value of over \$4000.00 a room.

Effective Period: 7/1/2012 - 4/20/2013

Wage Rate per Hour: **\$20.77**

Supplemental Benefit Rate per Hour: **\$8.68**

Supplemental Note: for new employee 0-12 months of employment - **\$6.37**; for new employee 13-24 months of employment - **\$8.43**

Effective 1/1/2013 - **\$9.43**; for new employee 0-12 months of employment - **\$6.92**; for new employee 13-24 months of employment - **\$9.18**

Effective Period: 4/21/2013 - 6/30/2013

Wage Rate per Hour: **\$21.34**

Supplemental Benefit Rate per Hour: **\$9.43**

Supplemental Note: for new employee 0-12 months of employment - **\$6.92**; for new employee 13-24 months of employment - **\$9.18**

NEW HIRE: Porter/Cleaner, may be paid a starting rate of 80% of the hourly rate published above. Upon completion of 30 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Residential Building Class "B" Cleaner/Porter

Residential Building Class "B": buildings where the assessed value of the land and building, based upon the 1935 assessment, divided by the number of rooms in the building, gives an assessed value of over \$2000.00 a room and not over \$4000.00 a room.

Effective Period: 7/1/2012 - 4/20/2013

Wage Rate per Hour: **\$20.71**

Supplemental Benefit Rate per Hour: **\$8.68**

Supplemental Note: for new employee 0-12 months of employment - **\$6.37**; for new employee 13-24 months of employment - **\$8.43**

Effective 1/1/2013 - **\$9.43**; for new employee 0-12 months of employment - **\$6.92**; for new employee 13-24 months of employment - **\$9.18**

Effective Period: 4/21/2013 - 6/30/2013

Wage Rate per Hour: **\$21.28**

Supplemental Benefit Rate per Hour: **\$9.43**

Supplemental Note: for new employee 0-12 months of employment - **\$6.92**; for new employee 13-24 months of employment - **\$9.18**

NEW HIRE: Porter/Cleaner, may be paid a starting rate of 80% of the hourly rate published above. Upon completion of 30 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Residential Building Class "C" Cleaner/Porter

Residential Building Class "C": buildings where the assessed value of the land and building, based upon the 1935 assessment, divided by the number of rooms in the building, gives an assessed value of \$2000.00 or less a room.

Effective Period: 7/1/2012 - 4/20/2013

Wage Rate per Hour: \$20.65

Supplemental Benefit Rate per Hour: \$8.68

Supplemental Note: for new employee 0-12 months of employment - \$6.37; for new employee 13-24 months of employment - \$8.43

Effective 1/1/2013 - \$9.43; for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

Effective Period: 4/21/2013 - 6/30/2013

Wage Rate per Hour: \$21.23

Supplemental Benefit Rate per Hour: \$9.43

Supplemental Note: for new employee 0-12 months of employment - \$6.92; for new employee 13-24 months of employment - \$9.18

NEW HIRE: Porter/Cleaner, may be paid a starting rate of 80% of the hourly rate published above. Upon completion of 30 months of employment, the new hire shall be paid the full wage rate. Upon completion of two years of employment the new hire receives the full supplemental benefit rate.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for work on a holiday plus the day's pay.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

- New Year's Day
- Martin Luther King Jr. Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Thanksgiving Day
- Christmas Day

Vacation

- 6 months.....three (3) days
 - 1 year.....ten (10) days
 - 5 years.....fifteen (15) days
 - 15 years.....twenty (20) days
 - 21 years.....twenty-one (21) days
 - 22 years.....twenty-two (22) days
 - 23 years.....twenty-three (23) days
 - 24 years.....twenty-four (24) days
 - 25 years.....twenty-five (25) days
- Plus two Personal Days per year.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

SICK LEAVE

After 1 year of service.....ten (10) days per year

(Local #32 B/J)

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

(NYC Administrative Code §6-109)

CLEANER (PARKING GARAGE)

Garage Cleaner

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$10.00

Supplemental Benefit Rate per Hour: \$1.50

Overtime

Time and one half the regular rate after an 8 hour day or after 40 hours in any work week.

(NYC Administrative Code §6-109)

FOOD SERVICE EMPLOYEES

Cook

Effective Period: 7/1/2012 - 6/30/2013

Wage Rate per Hour: \$15.40

Supplemental Benefit Rate per Hour: \$1.72

Cafeteria Attendant

Effective Period: 7/1/2012 - 6/30/2013

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Wage Rate per Hour: **\$10.24**
Supplemental Benefit Rate per Hour: **\$1.72**

Counter Attendant

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$10.31**
Supplemental Benefit Rate per Hour: **\$1.72**

Kitchen Helper / Dishwasher

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$9.83**
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

Gardener

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$17.04**
Supplemental Benefit Rate per Hour: **\$1.72**

Overtime

Time and one half the regular rate after an 8 hour day or 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)

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: 7/1/2012 - 6/30/2013

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

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: 7/1/2012 - 6/30/2013

Wage Rate per Hour: **\$10.00**

Supplemental Benefit Rate per Hour: **\$1.50**

(NYC Administrative Code §6-109)

SECURITY GUARD (ARMED)

Security Guard (Armed)

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$27.75**

Supplemental Benefit Rate per Hour: **\$4.73**

Supplemental Note: for new employee 0-30 days of employment - \$4.09; for new employee 31-120 days of employment - \$4.26; for new employee 121 days - 2 years of employment - \$4.37

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$28.00**

Supplemental Benefit Rate per Hour: **\$4.90**

Supplemental Note: for new employee 0-30 days of employment - \$4.26; for new employee 31-120 days of employment - \$4.43; for new employee 121 days - 2 years of employment - \$4.54

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Overtime Description

A guard who works a holiday is paid the regular rate plus receives the paid holiday.
Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	5 days
24	10 days
60	15 days
180	20 days
300	25 days

Sick Leave

Employees accrue paid sick leave at the rate of one (1) sick day for every six (6) months worked, up to a maximum of six (6) days a year.

(Local #32B/J)

SECURITY GUARD (UNARMED)

Security Guard (Unarmed) 0 - 6 months

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$12.60

Supplemental Benefit Rate per Hour: \$4.37

Supplemental Note: for new employee 0-30 days of employment - \$4.09; for new employee 31-120 days of employment - \$4.26

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$12.85

Supplemental Benefit Rate per Hour: \$4.54

Supplemental Note: for new employee 0-30 days of employment - \$4.26; for new employee 31-120 days of employment - \$4.43

Security Guard (Unarmed) 7 - 12 months

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$13.10
Supplemental Benefit Rate per Hour: \$4.37

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$13.35
Supplemental Benefit Rate per Hour: \$4.54

Security Guard (Unarmed) 13 - 18 months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$13.60
Supplemental Benefit Rate per Hour: \$4.37

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$13.85
Supplemental Benefit Rate per Hour: \$4.54

Security Guard (Unarmed) 19 - 24 months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$14.10
Supplemental Benefit Rate per Hour: \$4.37

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$14.35
Supplemental Benefit Rate per Hour: \$4.54

Security Guard (Unarmed) 25 - 30 months

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$14.60
Supplemental Benefit Rate per Hour: \$4.73

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$14.85
Supplemental Benefit Rate per Hour: \$4.90

Security Guard (Unarmed) 31 months or more

Effective Period: 7/1/2012 - 12/31/2012
Wage Rate per Hour: \$14.75
Supplemental Benefit Rate per Hour: \$4.73

Effective Period: 1/1/2013 - 6/30/2013
Wage Rate per Hour: \$15.15
Supplemental Benefit Rate per Hour: \$4.90

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Overtime Description

A guard who works a holiday is paid the regular rate plus receives the paid holiday.
Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

- New Year's Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	5 days
24	10 days
60	15 days
180	20 days
300	25 days

Sick Leave

Employees accrue paid sick leave at the rate of one (1) sick day for every six (6) months worked, up to a maximum of six (6) days a year.

(Local #32B/J)

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.

Effective Period: 7/1/2012 - 6/30/2013

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: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$31.02**
Supplemental Benefit Rate per Hour: None

Cashier

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$11.50**
Supplemental Benefit Rate per Hour: None

Clerk (various)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$14.60**
Supplemental Benefit Rate per Hour: None

Computer Assistant

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$20.61**
Supplemental Benefit Rate per Hour: None

Data Entry Operator

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$15.73**
Supplemental Benefit Rate per Hour: None

Receptionist

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$14.71**
Supplemental Benefit Rate per Hour: None

Secretary (various)

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$18.72**
Supplemental Benefit Rate per Hour: None

Word Processor

Effective Period: 7/1/2012 - 6/30/2013
Wage Rate per Hour: **\$19.50**
Supplemental Benefit Rate per Hour: None

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Overtime

Time and one half the regular rate after a 40 hour 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

Window Cleaner

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$26.12**

Supplemental Benefit Rate per Hour: **\$9.13**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$26.44**

Supplemental Benefit Rate per Hour: **\$9.51**

Power Operated Scaffolds, Manual Scaffolds, and Boatswain Chairs

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$28.37**

Supplemental Benefit Rate per Hour: **\$9.13**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$28.69**

Supplemental Benefit Rate per Hour: **\$9.51**

Window Cleaner Apprentice (0 - 3 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$19.35**

Supplemental Benefit Rate per Hour: **\$0.00**

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: **\$19.59**

Supplemental Benefit Rate per Hour: **\$0.00**

Window Cleaner Apprentice (4 - 7 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: **\$20.92**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$21.18

Supplemental Benefit Rate per Hour: \$9.51

Window Cleaner Apprentice (8 - 11 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$22.17

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$22.44

Supplemental Benefit Rate per Hour: \$9.51

Window Cleaner Apprentice (12 - 15 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$23.43

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$23.72

Supplemental Benefit Rate per Hour: \$9.51

Window Cleaner Apprentice (16 - 17 months)

Employee must be a registered apprentice with the New York State Department of Labor

Effective Period: 7/1/2012 - 12/31/2012

Wage Rate per Hour: \$24.70

Supplemental Benefit Rate per Hour: \$9.13

Effective Period: 1/1/2013 - 6/30/2013

Wage Rate per Hour: \$25.01

Supplemental Benefit Rate per Hour: \$9.51

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

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
§6-109 PREVAILING WAGE SCHEDULE

New Year's Day
Martin Luther King Jr. Day
President's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day
Personal Day

Vacation

After 7 months but less than 1 year of service.....5 days
1 year but less than 5 years of service.....10 days
5 years of service but less than 15 years of service.....15 days
15 years of service but less than 21 years of service.....20 days
21 years.....21 days
22 years.....22 days
23 years.....23 days
24 years.....24 days
25 years or more of service.....25 days
Plus 1 day per year for medical visit

SICK LEAVE:

10 days after one year worked. Unused sick days to be paid in cash.

(Local #32 B/J)

(NO TEXT ON THIS PAGE)



Leonard A. Mancusi
SENIOR ASSISTANT COMPTROLLER

THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET ROOM 1120
NEW YORK, N.Y. 10007-2341

TELEPHONE: (212) 669-3622
FAX NUMBER: (212) 669-8499

ALAN G. HEVESI
COMPTROLLER

MEMORANDUM

November 6, 2000

To Agency Chief Contracting Officers

From: Leonard A. Mancusi 

Re: Security at Construction Sites
.....

Prior to the enactment of Administrative Code §6-109, security guards on construction sites were not subject to prevailing wages. Security guards under the New York State labor law are covered under §230 which provides that prevailing wages are to be paid for security guards in existing buildings. §6-109 of the Administrative Code which was enacted in 1996 closed this loophole by including all security guards working pursuant to a city contract as a prevailing wage trade.

Although some construction contract boilerplate language has been amended to include §6-109, sub-contractors performing security services have advised us that they were not aware of this provision and, since traditionally, security guards were not a covered trade on construction sites, and they were not advised by a prime contractor that they would have to pay prevailing wages, they have not been doing so.

To avoid the possibility of issuing stop payments against prime contractors for the failure of their security service sub-contractors to pay

prevailing wages, we suggest that you write to all your existing security guard sub-contractors and their primes and in the future, upon approval of a security guard sub-contractor, advise the contractors of their obligation to pay prevailing wages under §6-109 of the Administrative Code.

As always, your cooperation is appreciated.

-LAM:er
ACCO.SECURITY AT SITES





NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 2 OF 3

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET

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

Together With All Work Incidental Thereto

BOROUGH OF MANHATTAN
CITY OF NEW YORK

Triumph Construction Corp.
Contractor.

Dated _____, 20____

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY

[Signature]
Acting Corporation Counsel

[Signature] 4/4/13

Dated April 4, 2013



**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

**SCHEDULE A
ADDENDA NOS. 1 TO 7**

FOR FURNISHING ALL LABOR AND MATERIALS NECESSARY AND REQUIRED FOR:

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

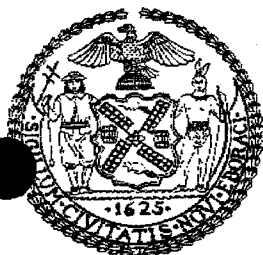
**INCLUDING SEWER, WATER MAIN, STREETSCAPING,
STREET LIGHTING, AND TRAFFIC SIGNAL WORK**

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

FOR THE DEPARTMENT OF TRANSPORTATION
PREPARED BY
URS CORPORATION

FEBRUARY 28, 2013



3-036



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

<u>REFERENCE</u>	<u>ITEM</u>	<u>REQUIREMENTS</u>
Section 26 Information for Bidders	Bid Security	See Attachment 1 (page A-1 of the Bid Booklet).
	Performance Security Payment Security	See Attachment 1 (page A-1 of the Bid Booklet).
Article 14 Contract	Date for Substantial Completion	See Page SA-2
Article 15 Contract	Liquidated Damages	For Each Consecutive Calendar Day Over Completion Time: <u>\$1,500.00</u>
Article 17 Contract	Subcontracts	Not to Exceed <u>50%</u> of Contract Price
Article 24 Contract	Deposit as Guarantee	Percent of Contract Price <u>1%</u>
	Maintenance Period	Eighteen (18) Months, excluding Trees Twenty-four (24) Months for Tree Planting
Article 77 Contract	M/WBE Program	See Subcontract Utilization Plan in the Bid Booklet
Section 6.40 Standard Highway Specifications	Liquidated Damages For Engineer's Field Office	For Each Calendar Day of Deficiency <u>\$250.00</u>
		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.
Section 6.70 Standard Highway Specifications	Liquidated Damages For Maintenance and Protection of Traffic	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>
		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>

Section 7.13 Standard Highway Specifications	Liquidated Damages For Maintenance of Site	For Each Calendar Day, For Each Occurrence: <u>\$250.00</u>
<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>		

Date for Substantial Completion (Reference: Article 14)

The Contractor shall substantially complete the Work within the Final Contract Duration determined in accordance with the terms and conditions set forth herein.

The Base Contract Duration for this project is 730 consecutive calendar days ("ccds").

The Final Contract Duration shall be the Base Contract Duration when a check mark is indicated before the word "NO", below, and shall be the Base Contract Duration adjusted by the table set forth below when a check mark is indicated before the word "YES", below.

YES NO

When the Final Contract Duration is indicated above to be adjusted by the table below, the table may increase the Base Contract Duration depending on the date of scheduled substantial completion to avoid a scheduled substantial completion of the Work during the winter months. The date of scheduled substantial completion shall be determined by adding the Base Contract Duration to the date specified to commence work in the written Notice to Proceed. The Final Contract Duration shall then be determined as follows:

- (a) Find the row that corresponds to the month of substantial completion based on the Base Contract Duration added to the date specified to commence work in the written Notice to Proceed.
- (b) Find the number of days to be added to the Base Contract Duration in the table below. Add that number of days to the Base Contract Duration to obtain the Final Contract Duration in consecutive calendar days.

Month of Substantial Completion based on the Base Contract Duration	Number of Days of adjustment
January	150
February	120
March	90
April	60
May	30
June	0
July	0
August	0
September	0
October	0
November - December 15	0
December 16 - December 31	180

In addition, should Item No. 9.30, "Storm Water Pollution Prevention," exist in the Contract and the required Storm Water Pollution Prevention Plan (SWPPP) does not conform to NYSDEC's recommended Standards, an additional 60 ccd shall be added to the above Final Contract Duration.

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

PART I. MINIMUM LIMITS AND SPECIAL CONDITIONS

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>■ Commercial General Liability Art. 22.1.1</p>	<p>\$<u>3,000,000</u> per occurrence</p> <p>\$<u>6,000,000</u> aggregate (applicable separately to this Project)</p> <p>Additional Insureds:</p> <p>1. <u>City of New York, including its officials and employees, and</u></p> <p>2. <u>The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies. The Contractor shall furnish two (2) certificates of insurance to and the policy shall be endorsed to provide thirty (30) days advance notice to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21st Floor, New York, NY 10004, of any material change and/or cancellation.</u></p> <p>3. <u>Consolidated Edison</u></p>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>■ Workers' Compensation Art. 22.1.2</p> <p>■ Disability Benefits Insurance Art. 22.1.2</p> <p>■ Employers' Liability Art. 22.1.3</p> <p>□ Jones Act Art. 22.1.4</p> <p>□ U.S. Longshoremen's and Harbor Workers Compensation Act Art. 22.1.4</p>	<p>Workers' Compensation: Statutory per New York State law without regard to jurisdiction</p> <p>Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction</p> <p>Employers' Liability: \$2,000,000 each accident</p> <p>■ Additional Requirements:</p> <p>(1) <u>Two (2) certificates of such insurance or authority for self-insurance shall be furnished to the Director, Risk Management, MTA Risk and Insurance Management Standards, Enforcement and Claims Unit, 2 Broadway, 21st Floor, New York, NY 10004</u></p>
<p>□ Builders' Risk Art. 22.1.5</p>	<p>_____ % of total value of Work City of New York and the Contractor named as Loss Payee for the Work in order of precedence, as their interests may appear</p>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<input checked="" type="checkbox"/> Comprehensive Business Auto Coverage Art. 22.1.6	\$2,000,000 per accident If vehicles are used for transporting hazardous materials, the Contractor shall provide pollution liability broadened coverage for covered autos (endorsement CA 99 48) as well as proof of MCS 90. Additional Insureds: (1) <u>City of New York, including its officials and employees, and</u> (2) <u>The New York City Transit Authority (NYCTA), Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), Staten Island Rapid Transit Operation Authority (SIRTOA), Metropolitan Transportation Authority (MTA), its subsidiaries and affiliated companies.</u>
<input type="checkbox"/> Pollution/Environmental Liability Art. 22.1.7	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
<input type="checkbox"/> Marine Protection and Indemnity Art. 22.1.8(a)	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<input type="checkbox"/> Ship Repairers Legal Liability Art. 22.1.8(b)	\$ _____ each occurrence [Contracting agency to fill in total value of City vessels involved]
<input type="checkbox"/> Collision Liability/Towers Liability Art. 22.1.8(c)	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
<input type="checkbox"/> Marine Pollution Liability Art. 22.1.8(d)	\$ _____ each occurrence Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>[OTHER] Art. 22.1.9</p> <p>■ Railroad Protection Liability Policy</p> <p>(ISO-RIMA or equivalent form) approved by Permittor covering the work to be performed at the designated site and affording protection for damages arising out of bodily injury or death, physical damage to or destruction of property, including damage to the Insured's own property and conforming to the following:</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 # 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 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. <u>New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operation Authority (MaBSTOA), the Staten Island Rapid Transit Operation Authority (SIRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, the City of New York (as Owner) and all other indemnified parties.</u></p>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

(PART I CONTINUED)

Insurance indicated by a blackened box (■) or by X in a □ to left will be required under this contract

Types of Insurance (per Article 22 in its entirety, including listed paragraph)	Minimum Limits and Special Conditions
<p>[OTHER]</p> <p>■ Professional Liability</p> <p>A. The Contractor’s Professional Engineer shall maintain and submit evidence of Professional Liability Insurance in the minimum amount of \$1,000,000 per claim. The policy or policies shall include an endorsement to cover the liability assumed by the Contractor under this Contract arising out of the negligent performance of professional services or caused by an error, omission or negligent act of the Contractor’s Professional Engineer or anyone employed by the Contractor’s Professional Engineer.</p> <p>B. Claims-made policies will be accepted for Professional Liability Insurance. All such policies shall have an extended reporting period option or automatic coverage of not less than two (2) years. If available as an option, the Contractor’s Professional Engineer shall purchase extended reporting period coverage effective on cancellation or termination of such insurance unless a new policy is secured with a retroactive date, including at least the last policy year.</p>	<p>Art. 22.1.9</p>
<p>[OTHER]</p> <p>■ Engineer’s Field Office</p> <p>Section 6.40, Standard Highway Specifications</p>	<p>Art. 22.1.9</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>

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

PART II. BROKER'S CERTIFICATION

[Pursuant to Article 22.3.1(a) 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 complete copies of all policies referenced in the Certificate of Insurance. In the absence of completed policies, binders are acceptable.]

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.

[Name of broker (typewritten)]

[Address of broker (typewritten)]

[Signature of authorized official or broker]

[Name and title of authorized official (typewritten)]

Sworn to before me this
____ day of _____, 200_

NOTARY PUBLIC

SCHEDULE A

(RELATING TO ARTICLE 22 – INSURANCE)

PART III. 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

3. NEW SECTIONS

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4.07 D	GRANITE CURBS
4.13 DS	DETECTABLE WARNING SURFACE - SPECIAL PRECAST
4.15 LSM	LIGHTWEIGHT SOIL MEDIUM
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7.17	OPEN-GRADED STONE BASE (under drain garden soil mix)
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E 260526	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
E 260529	HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
E 260533	RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
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E 262726	WIRING DEVICES
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SECTION 4.04 BPB

Concrete Base for Pavers, Thickness as Specified, Class B-32

4.04BPB.1. INTENT. This section describes construction of Concrete Base for Pavers.

4.04BPB.2. DESCRIPTION. Concrete base for pavers shall consist of a course of concrete of a thickness and type as specified on the Contract Drawings, which shall be keyed into the adjacent base for pavement when used in roadway areas or keyed into the adjacent concrete sidewalk when used in sidewalk areas.

4.04BPB.3. MATERIALS. Concrete shall comply with the requirements of **Section 3.05** of the NYCDOT Standard Highway Specifications, Class B-32, Type IA, unless otherwise specified. All materials shall comply with the requirements of **Item 4.04 BP** of the NYCDOT Standard Highway Specifications, unless otherwise specified.

Kind of reinforcement, size and placement shall be as specified or as shown on the Contract Drawings.

4.04BPB.4. METHODS.

Construction sequence shall comply with the requirements of **Item 4.04 BP** of the NYCDOT Standard Highway Specifications, except with the following modifications and additions:

Due to the existing subsurface vault in the area being paved under **Subsection 6.60 B**, Furnish and Install Asphalt Block Pavers of the NYCDOT Standard Highway Specifications, the Contractor shall be required to adhere to the proper concrete thicknesses as required in the Contract Drawings.

4.04BPB.5. TRAFFIC. No traffic of any kind will be allowed on the concrete base until permitted by the Engineer. Normally that shall be at least seven (7) days.

4.04BPB.6. MEASUREMENT. The volume of concrete in cubic yards and the amount to be paid shall be determined from cores taken by the Contractor after twenty-eight (28) days of curing in accordance with **Section 5.04**. Where concrete is laid upon an existing concrete base, the volume of concrete in cubic yards shall be determined from cross sections.

In determining the volume of concrete to be paid for, the spaces occupied by rails, bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

4.04BPB.7. PRICE TO COVER. The contract price for Concrete Base for Pavers per cubic yard shall cover the cost of all labor, materials,

equipment, insurance, and incidentals required to furnish, lay and cure the concrete, of the Class, Type and thickness specified, complete in full compliance with the requirements of the specifications, including, but not limited to, furnishing and placing foundation material and stainless steel dowels at expansion joints, to furnish such samples and cores for testing and to provide such testing equipment, laboratory space and facilities as may be required, and to maintain the concrete base in good condition as specified in **Section 5.05** of the NYCDOT Standard Highway Specifications.

Payment will be made under:

Item No.	Item	Pay Unit
4.04 BPB	CONCRETE BASE FOR PAVERS, THICKNESS AS SPECIFIED, CLASS B-32	C.Y.

**SECTION 4.04 MM
PROCEDURE FOR ESTIMATING CONCRETE STRENGTH
BY THE MATURITY METHOD**

4.04MM.1. DESCRIPTION. The Maturity Method is a non-destructive procedure for estimating concrete strength and shall be used to determine when to open the concreted area to traffic. The requirements of this Section shall apply to all concrete placed under Item Nos. 4.04 H, 4.04 HD and 6.97 A.

The Maturity Method will not be used by the Department for accepting the strength of a concrete. Strength testing by destructive means will still be used by the Department for strength acceptance.

Maturity will not be used to decrease curing times.

4.04MM.2. PROCEDURE FOR DEVELOPING A MATURITY CURVE. For each proposed mix design develop the maturity curve in accordance with ASTM C 1074. Make 6" x 12" cylinders and base the curve on compressive strength.

- (A) Make all specimens from the same batch of concrete. Batch size shall be at least 3 cubic yards. Mix using the same materials, mix design and mixing technique that will be used for concrete on the project. Use the same mixing equipment when possible. Mix at the maximum w/c ratio of the design. Mix at or within 0.5% of the maximum air content of the design. Additional maturity curves similar to the curves shown on pages A1-68 through A1-69, but limited to 28 days, can be made from different batches using the same mix design at lower w/c ratios and air contents, and these additional maturity curves can be used for interpolating concrete strength estimations if it can be shown that the concrete delivered to the project was at a lower w/c or lower air content.
- (B) Determine the plastic properties of the batch by performing slump, air content, unit weight, and concrete temperature before making specimens. Determine slump in accordance with ASTM C 143, air content in accordance with ASTM C 231 or ASTM C 173, unit weight in accordance with ASTM C 139, and temperature in accordance with ASTM C 1064.
- (C) Make a minimum of seventeen (17) specimens in accordance with ASTM C 192. Embed sensors in the center of two (2) of the specimens. Moist cure all specimens in a water bath or in a moist room meeting the requirements of ASTM C 511. Test cylinders in accordance with ASTM C 39. Do not test cylinders with sensors embedded in them. For high early strength concrete and for extra high early strength concrete, test when strengths are approximately equal to 30%, 60%, 75%, 85%, and

100% of the design strength. Additional specimens can be made and tested at other ages as well as unused specimens to help define the maturity curve.

- (D) At a minimum, personnel making cylinders and performing slump, air content, unit weight, and concrete temperature shall be ACI certified as Concrete Field Testing Technicians, Grade I, and personnel testing cylinders for compressive strength shall be ACI certified as Concrete Strength Testing Technicians.
- (E) Use digital data-loggers in conjunction with a commercial maturity instrument that automatically computes and displays maturity. Develop the curve using the temperature-time factor maturity function. Use a value of 32° F (0° C) for T_0 (datum temperature) unless a more accurate value is determined in accordance with Annex A1 of ASTM C 1074.

4.04MM.3. ACCEPTANCE OF A MATURITY CURVE BY THE DEPARTMENT. For each mix design submit the maturity curve, mix design, material sources, plastic test results, strength test results, data, calculations and method used for monitoring maturity in the laboratory to the Engineer. The Department will require 30 days to evaluate the results for acceptance.

4.04MM.4. USING CONCRETE MATURITY IN THE FIELD. Estimating concrete strength by maturity is acceptable when the concrete is batched using the same materials (including admixtures), material proportions, mix design, and mixing technique as that of the batch used to develop the maturity curve. The curve can be used on the project to estimate concrete strength if the w/c ratio of the concrete used on the project is less than or equal to the w/c ratio used to develop the curve.

- (A) Use digital data-loggers in conjunction with a commercial maturity instrument that automatically computes and displays maturity to monitor field placed concrete. Use the time-temperature maturity function. Use the same value for T_0 (datum temperature) that was used to develop the maturity curve.
- (B) Install at least one (1) sensor for every 3,600 square yards of concrete base (or fraction thereof) with the sensor representing the last 3,600 square yards of concrete pavement (or fraction thereof) installed in the last load of concrete mixed and placed that day. Install at least one (1) additional sensor each day in concrete that is placed within the last four (4) hours of work that day where maturity gain is expected to be the slowest. Maturity gain typically is expected to be the slowest in the thinnest section of pavement. If all sections of pavement have the same dimensions and no section is expected to gain maturity slower, place the additional sensor in any section of pavement

constructed from the second to last load of concrete mixed and placed that day.

- (C) Install additional sensors when necessary for accurately determining the maturity of a concrete or as directed by the Engineer.
- (D) Provide one (1) sensor to the Engineer for random placement at the Department's discretion for every ten (10) sensors the Contractor is required to install. If the number of sensors installed by the Contractor exceeds the minimum required by this specification, the number of sensors above the minimum will not be counted as required sensors.
- (E) When installing sensors, use a placement strategy that targets areas where the concrete is expected to gain maturity the slowest. Place sensors near the fringes, in thinner sections, or in shaded areas where the concrete will be cooler. Do not place sensors in the center of the pour where the concrete will be the hottest. Typical sensor placement should be 1' from an edge or corner and 6" below the surface, but try to maintain at least 6" of cover in each direction. At a minimum, install sensors with at least 3" of cover in each direction. Use traditional methods in lieu of maturity if the least dimension of a concrete is less than 6" (i.e. if 3" of cover cannot be maintained in each direction) because ambient conditions may affect the sensor causing maturity readings from that sensor to be inaccurate.
- (F) Provide the Engineer with one (1) set of the same maturity monitoring equipment that the Contractor will be using on the project so that DDC can independently monitor concrete maturity. Provide DDC personnel training on how to operate the equipment. The monitoring equipment will be returned at the completion of the project.
- (G) Maintain a separate log for each sensor which includes a unique ID; location; date and time of installation; date and time that the sensor began monitoring maturity; dates and times of all readings taken from the sensor; the corresponding temperature, maturity, and concrete age at each reading; and the date when readings were discontinued. Notify the Engineer immediately with problems or discrepancies with readings or if any sensors are found to be damaged or operating improperly, and document on the log the date and time this determination was made, what the problem is, and the steps taken to correct it. Have the log available for viewing by DDC project personnel at all times and provide an updated copy of the log to DDC project personnel on a weekly basis if the sensor is still in use.

4.04MM.5. VERIFICATION OF THE MATURITY CURVE. Maturity curve verification consists of making test specimens, monitoring the maturity of the specimens, testing the specimens by destructive means to determine the actual strength, and comparing the actual strength determined by destructive testing with the strength estimated by maturity. If the actual strength is the same or greater than the strength estimated by maturity, the curve is verified. If the actual strength is less than the strength estimate by maturity, the curve is not verified. If a curve cannot be verified, it may be an indication of changes or alterations in the mix design, batching procedures, material proportions, or properties in the materials being used, or that the maturity curve being used was not developed correctly.

Perform maturity curve verification weekly to determine if the strength of the concrete being supplied to the project is equal to or greater than the strength estimated by maturity. If four (4) consecutive weekly maturity curve verifications determine that the maturity curve being used is verified, reduce the frequency to once every two (2) weeks.

If maturity curve verification testing does not verify a maturity curve, immediately notify the Engineer, immediately discontinue using maturity for estimating strength, perform an investigation as to why maturity was not able to be verified, and provide the Engineer with a written report detailing why the curve was not verified and what actions will be taken to ensure that maturity will not be compromised in the future. If the Engineer is satisfied with the report and that the problem has been resolved, maturity can be used again on the project with maturity curve verification being performed as directed by the Engineer, but in no case, less than once a week. If future maturity curve verifications determine that the curve is verified, the frequency of maturity curve verification can be decreased at the City's discretion.

Maturity curve verification consists of the following:

- (A) Sample concrete from a load or batch being used on the project. If the maturity curve is based on compressive strength, make five (5) 6" x 12" cylinders for test specimens. Sample in accordance with ASTM C 172. Make and cure test specimens in accordance with ASTM C 31. At a minimum, personnel sampling and making specimens in the field will be ACI certified as Concrete Field Testing Technicians, Grade I.
- B) Place a sensor in the center of one of the test specimens and monitor maturity.
- C) Test the specimens in pairs and average the results to determine strength. Test the first pair of specimens when maturity readings indicate that the specimens have achieved strength between 50% and 70% of the design strength, and test the remaining pair when maturity readings indicate that the specimens

have achieved strength between 85% and 100% of the design strength. Test cylinders in accordance with ASTM C 39. Do not test the specimen with the sensor embedded in it. At a minimum, personnel testing cylinders for compressive strength will be ACI certified as Concrete Strength Testing Technicians.

- D) Compare the actual strength determined by destructive testing with the estimated strength determined by maturity to see if the curve is verified or not. If the actual strength is less than the estimated strength, the curve is not verified.

4.04MM.6. MATURITY CURVE LIFE. A maturity curve will be valid for two (2) years from the date the batch used to develop the maturity curve was made provided that the use of the Maturity Method is verified as per **Section 4.04MM.05** of this specification. The validity of a maturity curve can be renewed a maximum of two (2) times. Each renewal extends the validity of the curve for one (1) year.

The renewal of a maturity curve requires submission of a written request for renewal in advance of the maturity curve expiration date, submission of all verification data from **Section 4.04MM.05**, and acceptance of the data by the Department. Send the renewal request and verification data to DDC's Quality Assurance Bureau.

4.04MM.7. MEASUREMENT AND PAYMENT

No additional payment will be made for compliance with the provisions of this section.

SECTION 4.07 D
Granite Curbs

4.07D.1. INTENT. This section describes the construction of Granite Curbs.

4.07D.2 DESCRIPTION. Curbs shall be granite twelve (12") inch wide or six (6") inch wide as specified and with a concrete cradle, unless otherwise specified or shown on the Contract Drawings.

4.07D.3 MATERIALS. Construction materials shall comply with the requirements of **Subsection 4.07.3** of the NYCDOT Standard Highway Specifications, except with the following modifications and additions:

(A) CURBS

Granite curbs shall comply with the requirements of **Subsection 2.12** of the NYCDOT Standard Highway Specifications for a Type 1, Class A, granite curb, except that the twelve (12") inch wide curb shall be twelve (12") inches wide at the top and the bottom width shall be a minimum of ten (10") inches. The six (6") inch wide curb shall be six (6") inches on top and in accordance with **NYCDOT Standard Details for Construction Standard Detail H-1056**, and **Subsection 2.12** of the NYCDOT Standard Highway Specifications. Where shown on the Contract Drawings, the back of the curb shall be modified as shown on the Contract Drawings to accommodate the adjacent vault structure.

The standard length of granite curb is to be in ten (10') foot segments and shall comply with specifications as detailed in **Section 2.12** of the NYCDOT Standard Highway Specifications, with the exception of **Subsection 2.12.3.C** of the NYCDOT Standard Highway Specifications. Dimensions of the Granite curbs shall be as mentioned herein these specifications and as shown on the drawings, or as directed by the Engineer.

Typical joint width shall be 1/4" unless otherwise specified in the drawings.

Granite curb shall be "Jet Mist" granite, consisting of a fine-grained granite, dark grey in color, with light-grey veins and swirls, matching that specified for Dimensioned Granite Masonry in **Section 9.95 G**, all from the same quarry, as supplied by the following:

1. Furlong & Lee Stone Sales, Inc., 51 East 42nd Street, Suite 1409, New York, NY 10017, (212) 986-3828;
2. The North Carolina Granite Corporation, Mt. Airy, North Carolina, (336) 786-5141;
3. Hobart Stone Dealers, 761 Conklin Rd, Binghamton, NY 13903, Tel: (607) 723-0834; or,
4. an approved equivalent.

Stone from other suppliers may be deemed acceptable as "equivalent" based on criteria including individual specimen color and texture, material properties, contrast and compatibility of texture and color with other materials specified.

(B) PREFORMED RUBBER EPOXY EXPANSION JOINT FILLER

Expansion Joint Filler between the Granite Curbs and the 3" thick granite band assembly shall be 1/4" thick.

4.07D.4 SUBMITTALS. The following shall be submitted in accordance to the conditions of the Contract Drawings and Specifications.

- (A) All submittals shall comply with the requirements of **Subsection 9.95G.4.**, herein this Addendum.
- (B) Physical properties of the granite shall have been derived from tests by an independent engineering laboratory acceptable to the Engineer, and shall be furnished by the Contractor to the Engineer for the stone selected. This performance data shall include:
 - 1) ASTM C 97 - Absorption and Bulk Specific Gravity
 - 2) ASTM C 880 - Flexural Strength
 - 3) ASTM C 170 - Compressive Strength
 - 4) ASTM C 99 - Modulus of Rupture
 - 5) ASTM C 241 - Abrasion Resistance
- (C) Qualification of the Granite Installer: Prior to starting any granite work the Contractor shall submit for the Engineer's review and approval, proof that the Contractor/Subcontractor installing the granite has satisfactorily completion of three (3) similar or large exterior granite installations in the New York City region within the past five (5) years. Project references and the location of each installation for each of the 3 jobs are to be submitted in writing to the Engineer for approval.
- (D) Shop Drawings: Submit shop drawings for proposed straight and corner curb, including depressing and transitional curb details at pedestrian ramp locations, and for all special non-standard shaped curb, for the approval by the Engineer. Show sizes, thicknesses, jointing, anchoring, connection details, support, and dimensions for each stone piece. Show in detail the construction, method of installation and attachment, and anchoring devices. Shop drawings shall clearly show the relationship to adjoining construction. Stone pieces on the shop drawings shall be numbered and the numbers shall correspond to the numbers of stone pieces delivered to the site. Show location of mortar pointed and sealant filled joints.

4.07D.5. METHODS.**(A) ALL NEW GRANITE CURBS**

Construction sequence shall comply with the requirements of **Subsections 4.07.4** and **4.07.5** of the Standard Highway Specifications, except with the following modifications and additions:

Due to the area being paved under this Section, the Contractor shall be required to perform line and grade surveys, in accordance with the requirements of **Section 6.41**, of the area being paved to ensure that the finished work under this Section is at the proper elevation, grade and alignment. Should the Contractor fail to achieve the proper elevation, grade and alignment of pavers, he shall be required to excavate and reconstruct the area as directed by the Engineer, at no additional cost to the City.

Prior to construction of any granite curb under this section, the Contractor shall first be required to construct onsite or at another location as directed by the Engineer, a mock-up of the proposed curb constructed in accordance with the Contract Documents and Specification. The mock-up is to be done in conjunction with mock-ups to be constructed under **Sections 6.60 B** and **9.95 G**, such that it incorporates a representative section of the plaza scope of work as agreed upon by the Engineer. Written acceptance and approval of the mock-up by the Engineer is required before proceeding with the work under this section.

(B) NEW GRANITE CURBS OVER SHALLOW CONDITIONS

Prior to construction of any granite curb under this section, the Contractor shall first be required to locate the exterior vault wall prior to installing the granite curb to ensure that the finished work under this Section does not damage the existing vault. Where the vault is present, a granite curb over shallow conditions shall be installed in accordance with the Contract Drawings. Should the Contractor damage the vault, he shall be required to repair the structure to the satisfaction of the Engineer at no additional cost to the City.

4.07D.6. MEASUREMENT. The quantity to be measured for payment shall be the number of linear feet of each type of new granite curb constructed, complete, as required, measured in place along the top of the exposed face of curb, and adjusted in accordance with **Section 5.04** of the Standard Highway Specifications. Curved granite curb will be measured as straight curb when the radius is greater than 100 feet and as corner curb when the radius is 100 feet or less. Corner curb will be measured only from PC to PT.

4.07D.7. PRICES TO COVER. The contract price per linear foot of each type of new curb with concrete cradle shall cover the cost of all labor, materials, equipment, insurance, and incidentals required

to construct the curb complete in place, including, but not limited to, performing line and grade surveys, excavation (other than rock excavation), backfilling, sealing, and jointing, in full compliance with the requirements of the specifications, to furnish such samples for testing and to provide such testing equipment, laboratory space and facilities as may be required, construction of the sample mock-up of the work, and to maintain the curb in good condition as required in **Section 5.05** of the NYCDOT Standard Highway Specifications.

Payment will be made under:

Item No.	Item	Pay Unit
4.07 DB	NEW GRANITE CURB, STRAIGHT (1'-0" WIDE)	L.F.
4.07 DC	NEW GRANITE CURB, CORNER (1'-0" WIDE)	L.F.
4.07 DD	NEW STRAIGHT GRANITE CURB, DEPRESSED AND TRANSITION RAMP (1'-0" WIDE)	L.F.
4.07 DE	NEW GRANITE CURB, STRAIGHT (6" WIDE)	L.F.

SECTION 4.13 DS
Detectable Warning Surface - Special Precast

4.13DS.1. DESCRIPTION. This work shall consist of furnishing and installing a precast concrete detectable warning surface on pedestrian ramps as indicated on the Contract Drawings.

4.13DS.2. MATERIALS.

- (A) All detectable warning systems shall meet the following requirements:

The detectable warning surface shall be of the dimensions shown on the drawings. It shall be an approximate visual match to the white of Federal Standard 595C #37886 or Munsell Book Notation N9/ color precast concrete paver (with truncated dome surface required for ADA compliance) with light sandblast or acid-etch finish, as manufactured by Unilock New York, Brewster, NY 10509, Phone: (845) 278-6700; or equivalent type as manufactured by Hanover Architectural Products, Hanover, PA 17331, Phone: (717) 637-0500; or as manufactured by Wassau Tile, Wausau, WI 54402, Phone: (800) 388-8728; or, an approved equivalent.

The detectable warning surface shall contrast visually with adjoining surfaces by at least a 70% as defined in the Americans with Disabilities Act Accessibility Guidelines (ADAAG) Specifications.

- (B) **SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Submit product data and two (2) 12" x 12" samples exhibiting the full range of color and texture of the product.

The friction characteristics of completed detectable warning surfaces shall be approximately the same as the adjoining sidewalk or sidewalk pedestrian ramp surfaces as determined by the Engineer.

4.13DS.3. METHODS. Special detectable warning surface units shall be as shown on the Contract Drawings, and shall be installed on a bituminous setting bed in accordance with specifications for Item 6.60 B, Furnish and Install Asphalt Block Pavers. The pavers shall be used as whole units. Under no circumstances should pavers be cut.

4.13DS.4. MEASUREMENT. The quantity of Detectable Warning Surface to be measured for payment shall be the number of square feet, measured to the nearest tenth of a square foot, installed to the satisfaction of the Engineer.

4.13DS.6. BASIS OF PAYMENT. The unit price bid per square foot of Detectable Warning Surface - Special Precast, shall include all labor, material, equipment, insurance, and incidental necessary to complete the work, including but not limited to bedding material, job site sample(s), repairs and clean-up.

Payment for this item, Detectable Warning Surface - Special Precast, shall be in addition to payment for the concrete base on which the detectable warning surface is installed.

Payment will be made under:

Item No.	Item	Pay Unit
4.13 DS	DETECTABLE WARNING SURFACE - SPECIAL PRECAST	S.F.

**SECTION 4.15 LSM
Lightweight Soil Medium**

4.15LSM.1. DESCRIPTION. Under this section, the Contractor shall furnish and place Lightweight Soil Medium in accordance with the Contract Drawings, the specifications and as directed of the Engineer.

4.15LSM.2. MATERIAL.

(A) **LIGHTWEIGHT SOIL MEDIUM.** Soil medium shall be a specially-blended lightweight growing medium composed of expanded shale, sand, and compost from vegetable matter, as "LiteTop Semi-Intensive" growing medium as supplied by American Hydrotech, "Rooflite Semi-Intensive" as supplied by Skyland USA, or "ZinCoblend-SI" as supplied by ZinCo USA, Inc., or approved equivalent with the following physical characteristics:

Water retention capacity:	> 40%
Air-filled porosity:	> 10%
Saturated density:	900 - 1400 kg/m3
Organic matter (dry base):	6%-12%
PH:	6.0 - 7.5
C/N Ratio:	< 20

(B) **SUBMITTAL.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Submit product data.

4.15LSM.3. METHODS. Install Soil Medium carefully to avoid damage to drainage/water retention layer below. Spread soil medium in lifts of 6" and compact with a 300 lb. roller or perform equivalent hand tamping, in accordance with requirements of drainage/water-retention system manufacturer. Do not spread if Soil Medium is frozen, muddy, or excessively wet. Grade planting bed to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

4.15LSM.4. MEASUREMENT. The quantity of Lightweight Soil Medium to be measured for payment shall be the number of cubic yards of material that has been satisfactorily installed in areas as indicated on the Contract Drawings and where directed by the Engineer, measured in place after compaction.

4.15LSM.5. PRICE TO COVER. The unit price bid per cubic yard for Lightweight Soil Medium shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to complete the work under this section in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.15 LSM	LIGHTWEIGHT SOIL MEDIUM	C.Y.

SECTION 4.15 A
Soil Preparation and Mixes

4.15A.1. INTENT. This Section describes the following:

- (A) Excavation and removal of subsoil as necessary to allow for full depth of Structural Topsoil and Urban Planting Mix installation per details and specifications.
- (B) Preparing, placing, and spreading Structural Topsoil mix for tree plantings in paved areas.
- (C) Preparing, placing, and spreading topsoil mixes for shrub and groundcover planting areas and planters.
- (D) Testing of both on-site and off-site borrow topsoil for approved use in Urban Planting Mix.
- (E) Preparing subgrade, including scarification of subgrade, prior to placement of planting soil mixes.
- (F) Protecting all plant mix stockpile and mix installations until substantial completion.
- (G) Protection of finished paving, light standards, utility or other finished work over the area of construction concurrent with any and all construction operations.

4.15A.2. MATERIALS.

Structural Topsoil: Shall conform with "CU Soil", as patented by Cornell University, patent #5,849,069. The product shall be obtained from a licensed supplier and proof of such licensing shall be submitted to the Engineer prior to delivery. Tri-State licensed providers as of this date are Second Nature, Stamford, Ct. (203) 327-9456 or East Coast Mines, Quogue, N.Y. (631) 653-5445. For further information on licensed providers or licensing requirements and application, contact Mike Comella at the Cornell Research Foundation, (607) 257-1081. Structural Topsoil components shall be mixed to the following proportion:

<u>Component</u>	<u>Unit of Weight (Dry)</u>
Crushed Stone	85%
Clay Loam	15%
Hydrogel	As recommended by "CU Soil" licensed provider

Crushed Stone for Structural Topsoil: Shall be crushed granite or traprock; no limestone or sandstone will be accepted. No recycled material shall be accepted. Stone shall meet the AASHTO/ ASTM C33 requirements for #4 crushed angular stone graded within the following limits:

<u>Passing Sieve (dry analysis)</u>	<u>Percent by Weight</u>
2 inch	100%
1-1/2 inch	90-100%
1 inch	20-55%
3/4 inch	0-15%
3/8 inch	0-5%

Stone shall be clean and certified to meet NYCDOT aggregate soundness requirements for use in road construction. A single sized stone near one inch (1") will be preferable to a wider size distribution or smaller single size stone fitting the general description.

Clay Loam for Structural Topsoil: Shall be as determined by the USDA Classification System and mechanical analysis, as per ASTM D-422. Clay loam shall be of uniform composition, without admixture of subsoil, and free of stones greater than one-half inch (1/2") diameter, leaves, roots, debris, toxic materials, or lumps or clods over one inch (1") diameter. It shall have been obtained from naturally well drained areas which have never been previously stripped for topsoil and shall have a history of supporting satisfactory vegetative growth. It shall contain not less than two percent (2%) nor more than five percent (5%) organic matter, as determined by loss on ignition of oven-dried samples, dried to a constant weight at a temperature of 230°F, plus or minus 9°F. Mechanical analysis for clay loam shall be as follows:

<u>Textural Class</u>	<u>Percent of Total Weight (Dry)</u>
Gravel	Less than 5%
Sand	25 - 30%
Silt	20 - 40%
Clay	25 - 40%

Clay loam shall meet or be amended to meet the following chemical analysis criteria:

1. pH between 5.5 and 6.5.
2. Organic matter 2 - 5 percent by dry weight.
3. Nutrient levels as required by the testing laboratory recommendations for the types of plants to be grown in the Structural Topsoil.
4. Toxic elements and compounds below the US EPA Standards for Exceptional Quality Sludge, or local standards, whichever are more stringent.
5. Soluble salts less than 1.0 millimho per cm.
6. Cation exchange capacity (CEC) greater than 10.

7. Carbon/ Nitrogen ratio less than 33:1.

Clay loam shall be the product of a commercial processing facility specializing in production of stripped natural topsoil. No clay loam shall come from USDA classified prime farmland.

Slow Release Fertilizer for Structural Topsoil: Commercial fertilizer shall comply with U.S. and N.Y State fertilizer laws. Fertilizer shall be delivered in original unopened containers. The fertilizer shall be 15-2-15 liquid slow release (50%), or approved equal, formulated for mixing into the soil and certified by the manufacturer to provide controlled release of nitrogen continuously for a period of no more than twelve (12) months. Fertilizer shall be delivered in original unopened containers, which shall bear the manufacturer's certificate of compliance covering analysis, and shall be furnished to the Engineer.

pH Adjustment for Structural Topsoil: To lower the clay loam pH to acceptable levels, commercial granular ferrous sulfate, ninety six percent (96%) pure sulfur may be added to lower soil pH above 6.5. To raise pH levels, the manufacturer may add agricultural limestone containing a minimum of eighty five percent (85%) carbonates. Minimum gradation: 100% passing 10 mesh sieve, 98% passing 20 mesh sieve, 55% passing 60 mesh sieve, and 40% passing 100 mesh sieve.

Hydrogel: Shall be a potassium propenoate-propenamide copolymer hydrogel meeting the requirements of "CU Soil" patent.

Loam for Urban Planting Mix: Shall be as determined by the USDA Classification System and mechanical analysis, as per ASTM D 422. Loam shall be of uniform composition, without admixture of subsoil, and free of stones greater than one-half inch (1/2") diameter, leaves, roots, debris, toxic materials, or lumps or clods over one inch (1") diameter. It shall have been obtained from naturally well drained areas which have never been previously stripped for topsoil and shall have a history of supporting satisfactory vegetative growth. It shall contain not less than three percent (3%) nor more than eight percent (8%) organic matter, as determined by loss on ignition of oven-dried samples, dried to a constant weight at a temperature of 230°F, plus or minus 9°F. Mechanical analysis for loam shall be as follows:

<u>Textural Class</u>	<u>Percent of Total Weight (Dry)</u>
Gravel	Less than 5%
Sand	30 - 50%
Silt	30 - 50%
Clay	10 - 25%

Loam shall meet or be amended to meet the following chemical analysis criteria:

1. pH between 6 and 7.
2. Organic matter 5 - 8 percent by dry weight.
3. Nutrient levels as required by the testing laboratory recommendations for the types of plants to be grown in the Structural Topsoil.
4. Toxic elements and compounds below the US EPA Standards for Exceptional Quality Sludge, or local standards, whichever are more stringent.
5. Soluble salts less than 1.0 millimho per cm.

Loam shall be the product of a commercial processing facility specializing in production of stripped natural topsoil. No loam shall come from USDA classified prime farmland.

Compost for Urban Planting Mix: Shall be shredded leaf litter, composted for a minimum of one year (12 months) and tested to confirm requirements stated herein. Leaf mold must be free of debris such as plastic fragments, glass, metal fragments, stones larger than (1/2"), large branches, and large roots. The leaf mold should have a pH value measured as a 1:5 dilute in the range from 6.5 - 7.2. The soluble salts measurement (Electric Conductivity) should not exceed 0.5 mmhos/cm measured as a 1: 5 dilute. The organic matter content should be from 60 - 90% by weight. The carbon/nitrogen ratio should fall between 12:1 and 25:1.

Heavy metal content of leaf mold shall not exceed the following indicated amounts:

<u>Element</u>	<u>Acetate Extract</u>	<u>HCL Extract</u>
Iron	0.5 ppm	3.1 ppm
Manganese	0.5 ppm	15.4 ppm
Molybdenum	0.4 ppm	0.8 ppm
Zinc	0.2 ppm	4.4 ppm
Aluminum	0.2 ppm	1.2 ppm
Boron	1.1 ppm	1.7 ppm,
Copper	0.2 ppm	0.08 ppm
Lead	0.1 ppm	0.4 ppm
Selenium	None	0.4 ppm
Mercury	None	None
Chromium	None	None
Cadmium	None	0.02 ppm
Nickel	None	0.04 ppm
Cobalt	None	0.05 ppm

Sand for Urban Planting Mix: Shall be washed coarse grit mason sand.

Bonemeal for Urban Planting Mix: Shall be finely ground and have the following N-P-K (Nitrogen-Phosphorus-Potassium) analysis: 4-12-0.

Commercial Fertilizer for Urban Planting Mix: Shall have the following N-P-K analysis: 10-6-4.

Controlled-release Fertilizer for Urban Planting Mix: Shall be in granular form and shall have the following N-P-K analysis: 10-6-4, as manufactured by Osmocote, or approved equivalent. If soil tests indicate need for a different composition, Contractor shall submit proposed alternate fertilizer for approval.

Limestone for Urban Planting Mix: Shall be granular limestone, produced from Dolomitic limestone specifically for use in planting, with a minimum of 86% of calcium and magnesium carbonates.

Sulphur for Urban Planting Mix: If lower pH is required for use with certain plant materials, the Contractor shall use a horticultural elemental sulfur product for amendment of soil used for planting of those plant materials. Peat moss or copper sulfate may not be used to lower pH.

Urban Planting Mix: shall consist of the following primary components, in proportions by volume: 70% Loam, 15% compost, and 15% sand. Additionally, Urban Planting Mix shall be amended with the following amendments and amounts per cubic yard:

5 pounds bonemeal, 1 pound commercial fertilizer, 1 pound controlled release fertilizer, 2 pounds Hydrogel (or as recommended by manufacturer), and Limestone as required for specified pH.

Urban Planting Mix shall conform to the following requirements:

Organic Matter: 4% minimum - 10% maximum.

pH: 6.0 - 7.0.

Soluble salts: Less than 2 milimhos per centimeter.

Macronutrients:

Nitrogen: 20 - 100 ppm

Phosphorus: 5 - 50 ppm

Potassium: 10 - 200 ppm

Secondary nutrients:

Calcium: 100 - 200 ppm

Magnesium: 10 - 180 ppm

Sulphur: 10 - 20 ppm

Micronutrients:

Boron: 0.05 - 0.5 ppm

Chlorine: 5 - 50 ppm

Copper: 0.001 - 0.5 ppm
Iron: more than 0.5 ppm
Manganese: more than 0.5 ppm
Molybdenum: less than 10 ppm
Zinc: 0.3 - 3 ppm

4.15A.3. SUBMITTALS. The Contractor shall submit test reports for soil components from an approved independent testing laboratory indicating the following:

License: Submit the manufacturer's license to produce the patented "CU Soil".

Clay Loam for Structural Topsoil: Submit test results for particle size, bulk density, pH, percent organic content by weight, nutrient levels including nitrogen, phosphorus, and potassium, soluble salts in ppm, and chemical analysis. In addition, submit the locations of all field sources for the clay loam and a list of all chemicals, insecticides, and herbicides applied to the clay loam in the previous five (5) years, and a list of all crops grown in the clay loam source fields in the previous three (3) years.

Loam for Urban Planting Mix: Submit test results for particle size, bulk density, pH, percent organic content by weight, nutrient levels including nitrogen, phosphorus, and potassium, soluble salts in ppm, and chemical analysis. In addition, submit the locations of all field sources for the loam and a list of all chemicals, insecticides, and herbicides applied to the loam in the previous five (5) years, and a list of all crops grown in the loam source fields in the previous three (3) years.

Crushed Stone for Structural Topsoil: A three pound (3 lb.) bag of crushed stone shall be submitted with test results and contract name and number attached for approval prior to installation. Submit test results for particle size, loose and rodded unit weight, bulk specific gravity, soundness, absorbance, and stone dimension description, as per ASTM D 4791, for the crushed stone.

Soil Amendments for Urban Planting Mix: Submit technical descriptive data including, but not limited to, manufacturing company's or supplier's product testing and analysis and installation instructions for Organic Matter (including source, guaranteed analysis, and weight for packaged material), Ground Limestone (including guaranteed analysis, and weight for packaged material), Fertilizer (including guaranteed analysis), and Systemic Herbicide (including complete information including manufacturing companies recommendations for use).

4.15A.4. METHODS.

Soil Mixing and Quality Control Testing for Structural Topsoil: All Structural Topsoil shall be mixed using appropriate soil measuring, mixing, and shredding equipment of sufficient capacity and capability to assure proper quality control and consistent mix ratios. Structural Topsoil must be mixed in the presence of the licensee, and no soil shall be placed until inspected by the licensee. No mixing of Structural Topsoil at the project site shall be permitted unless a large paved area is available for mixing and the site has been pre-approved for use by the Engineer. No Structural Topsoil shall be mixed or placed in air temperatures below 40° F or delivered or placed in frozen, wet, or muddy conditions. Material shall be delivered at or near optimal compaction moisture content, as determined by AASHTO T 99 (ASTM D 698). No material shall be delivered or placed in an excessively moist condition, beyond two percent (2%) above optimal compaction moisture content, as determined by AASHTO T 99 (ASTM D 698).

Warning: Do not mix or transport Structural Topsoil when rain is expected. Place pavement immediately after placing and compacting Structural Topsoil to prevent excessive hydration.

Structural Topsoil components and the finished mixture shall be protected from excess water absorption and erosion at all times. Do not store materials unprotected from rainfall, nor allow excess water to enter the site prior to compaction. If water is introduced into the material after grading, allow material to drain to near optimal compaction moisture content.

The mixing procedure, performed by a front end loader shall proceed as follows: On a flat asphalt or concrete paved surface, spread an eight inch to twelve inch (8-12") layer of the specified crushed stone. Spread evenly over the crushed stone a proportional amount of Hydrogel. Spread over the Hydrogel and crushed stone a proportional amount of clay loam. Blend the entire amount by using a front end loader or other suitable equipment until a consistent blend is achieved.

Add moisture gradually and evenly during the blending and mixing operation as required to produce the required moisture content. Add soil amendments to alter soil fertility, including fertilizer and pH adjustment at the rates recommended by soil test results. The soil pH shall be adjusted to fall between 5.5 and 6.5 two months after mixing, if the material is stored. The soil component Carbon/Nitrogen ratio shall be adjusted to be less than 1:33 within two months after mixing.

The Contractor shall mix sufficient quantity in advance of the time the material is needed at the job site to allow adequate time for the required quality control testing. Storage piles shall be protected from rain and erosion by covering with plastic sheeting.

Soil Mixing and Quality Control Testing for Urban Planting Mix: Adequate quantities of mixed planting soil materials shall be provided to attain, after compaction and natural settlement, all design finish grades. Verify quantities for placement to suit conditions.

Uniformly mix ingredients as specified (loam, sand and organic amendment, and other ingredients deemed to be necessary as a result of testing) by wind rowing/tilling on an approved hard surface area. Organic amendment material shall be maintained moist, not wet, during mixing.

Mixing of Amendments: Add leaf mold and sand in proportions as specified and as confirmed by testing. Other amendments shall not be added unless approved to extent and quantity by Engineer, and additional tests have been conducted to verify type and quantity of amendment is acceptable.

All amendments shall be thoroughly incorporated into the mixture to assure uniform distribution. Delay mixing of fertilizers if planting will not follow within a few days.

Planting mixture shall be pre-mixed and placed as specified. Bring to pH levels of 6.0 (minimum) to 7.5 for non-ericaceous plants and for ericaceous plants. PH shall be verified by testing. Lower pH by using elemental sulfur product.

Stockpiling: Stockpiling on-site, off-site and at source should be restricted to no more than the needs of what can be used in a 24-hr. period. Stockpiles should be no more than 6 feet in height to prevent anaerobic conditions within the pile(s). Stockpiles shall be sheltered from weather to prevent excessive water absorption and blowing by winds.

Dispose of refuse and debris offsite from these operations. Do not dump or burn materials on site. Maintain the site in an orderly condition during the progress of the Work.

Installation of Structural Topsoil and Urban Planting Mix: The Contractor shall notify the Engineer of any subsurface conditions which will affect the Contractor's ability to complete the work, and shall locate and confirm the locations of all underground utility lines and structures prior to starting any excavation in the area to receive soil mixes by calling New York City/Long Island Call One Center, (800) 272-4480. The Contractor shall be liable to repair any damage to underground City owned utilities or structures caused by their activity during the progress of this work, at their own expense. Where tree roots larger than one inch (1") diameter are damaged, the Contractor shall ensure that damaged root sections are cleanly cut with sterilized pruning equipment.

Soil mixes shall only be installed after the installation of all walls, curbs, footings, and utility work in the area has been completed. For site elements dependent on the Structural Topsoil for foundation support, postpone installation until immediately after the installation of the Structural Topsoil. The Contractor shall be responsible for any and all damage caused by the installation of Structural Topsoil and all disturbed areas shall be restored to their original condition, to the satisfaction of the Engineer.

The Contractor shall excavate and compact the proposed subgrade to the required depths and dimensions indicated on the drawings or as directed in the field. Do not over excavate compacted subgrades of adjacent pavement or structures. Confirm that the subgrade is at the proper elevation and compacted as required. The excavation shall be cleared of all construction debris, trash, rubble, and foreign material.

Any soils polluted by gasoline, oil, plaster, construction debris, unacceptable soils, or other substances, which would render soils unsuitable for plant growth shall be removed from the premises whether or not such pollution occurs or exists prior to or during the Contract period. All remedial operations associated with soil mixes and controlled fill shall be reviewed and approved by the Engineer

Special Installation Requirements for Structural Topsoil: When planting trees in the Structural Topsoil, the rootball shall rest on the Structural Topsoil or the prepared subgrade at such a level that the crown of the tree is at finished grade. Cut and remove rope or wire from the top fifty percent (50%) of the rootball and pull the burlap back to the edge of the rootball, removing as much burlap and twine as possible. All plastic or synthetic product must be completely removed from the rootball at the time of planting. If soil is covering the crown, it must be removed so that the crown sits at the proper level. Any wire basket enclosed rootball will need to have at least two-thirds (2/3) of the basket cut away from the sides and top to prevent future root disturbance. Wire must not be galvanized or aluminum wire.

Install the first six inch (6") lift of Structural Topsoil mix over the prepared subgrade. Install succeeding layers in six inch (6") lifts and compact each lift. Compact all materials to not less than ninety five percent (95%) of peak dry density from a standard AASHTO compaction curve (AASHTO T 99). No compaction shall occur when moisture content exceeds the maximum listed herein. Delay compaction at least twenty four (24) hours if moisture content exceeds the maximum allowable, and protect the Structural Topsoil during delays in compaction with plastic or plywood, as directed by the Engineer.

Prior to placing pavement, the licensed CU Soil provider and the Engineer shall check the CU Soil material for consistency with the color and texture of the approved sample supplied by the Contractor. In the event that the material supplied varies significantly from the approved sample, the Engineer may request that the Contractor test the installed Structural Topsoil. Any mix which varies significantly from the approved testing results, as determined by the Engineer, shall be removed and new Structural Topsoil installed that meets the specifications.

Special Installation Requirements for Urban Planting Mix: Place and spread planting soil mix over approved subsurface to a depth sufficiently greater than the depth required for and planting areas so that after natural settlement, misting or light rolling, as previously approved by Engineer, the completed work will conform to the lines, grades, and elevations shown or otherwise indicated. Compaction of mix shall not exceed 85%. Required planting soil depths shall be as indicated on drawings as measured in place in a settled position. Place soil lightly in layers of a maximum of 12" lifts and very carefully settle soils to eliminate air pockets and to minimize future settling. Lightly scarify previously placed surfaces prior to placing subsequent lifts. Proposed method of settlement shall be as previously approved by Engineer. Method may include, but is not limited to, natural settlement over an approved period of time or light hand temp and light water misting of each layer. After natural settlement has occurred, add soil to maintain finished grades. If for any reason soil is left exposed for a longer duration prior to planting, add soil and re-grade as required. Soil shall not be so compacted as to in any way restrict the flow of water or air through soil. Planting beds shall be fine graded within $\pm 1/10$ (0.10) feet of grades indicated on drawings. Maintain all "flat" areas and slopes to allow free flow of surface drainage without ponding.

4.15A.5. MEASUREMENT. The quantity of STRUCTURAL TOPSOIL and URBAN PLANTING MIX to be paid for under these items shall be the number of CUBIC YARDS actually placed in final compacted position to the satisfaction of the Engineer, computed from payment lines indicated on the Contract Drawings.

4.15A.6 PRICES TO COVER.

(A) STRUCTURAL TOPSOIL

The price bid for STRUCTURAL TOPSOIL shall be a unit price per CUBIC YARD of Structural Topsoil and shall include the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to prepare and place the Structural Topsoil mix, including, but not limited to, clay loam, Hydrogel, crushed stone, fertilizer, pH adjustment, all required testing, submittals, licensing fees, and incidental expenses; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Excavation, pavements and plant material shall be paid for separately under their respective contract items.

(B) URBAN PLANTING MIX

The price bid for URBAN PLANTING MIX shall be a unit price per CUBIC YARD of Urban Planting Mix and shall include the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish, prepare and place the mix, including, but not limited to, all amendments specified, all required testing, submittals, licensing fees, and incidental expenses; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Excavation and plant material shall be paid for under the respective contract items.

Payment will be made under:

Item No.	Item	Pay Unit
4.15 SSM	STRUCTURAL TOPSOIL	C.Y.
4.15 UPMB	URBAN PLANTING MIX	C.Y.

SECTION 4.18 DM
Geotextile/Composite Drainage Mat

4.18DM.1. Description. This work shall consist of furnishing and installation of subsurface drain system in subsurface planters, including geocomposite drain and related work in accordance with Contract Drawings, specifications and directions of the Engineer. This work shall include all necessary materials, labor, supervision and equipment for installation of a complete subsurface drainage system. Installer shall be experienced in the installation of drainage mats as specified in this section.

4.18DM.2. Materials.

(A) Geocomposite drainage mat shall be a sheet product manufactured for combined drainage and waterproofing protection, composed of recycled polypropylene filaments fused in a waffle-pattern drainage core bonded to nonwoven geotextile fabric on both sides. Thickness to be 0.375" minimum, 0.5" maximum. Total weight to be minimum 22 oz/cubic yard. Compressive Strength to be 30,000 psf or greater without impediment of flow per ASTM D 1621 and ASTM D 4716. Deliver materials to job site in manufacturer's undamaged packaging and complete with installation instructions. Store off ground, under cover, protected from ultra-violet radiation, weather and construction activities.

(B) **Submittals.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Submit manufacturer's product data sheets for drainage system specified and product samples.

4.18DM.3. Methods. The Contractor shall comply with all manufacturer recommendations per installation instructions, data sheets and packaging. Before beginning installation, the Engineer shall inspect and approve the subsurface upon which the mat shall be installed. Prior to installation, ensure waterproofing has been properly installed and flood tested.

When requested by the Engineer, provide a manufacturer representative to review work performed.

4.18DM.4. Measurement. The quantity to be measured for payment shall be the number of square feet of Geotextile/Polyethylene Drainage Mat installed to the satisfaction of the Engineer.

4.18DM.5. Price to Cover. The unit price bid per square foot of Geotextile/Polyethylene Drainage Mat shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work as required; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.18 DM	GEOTEXTILE/COMPOSITE DRAINAGE MAT	S.F.

SECTION 4.18 RB
Root Barrier Fabric

4.18RB.1. DESCRIPTION. Under this section, the Contractor shall furnish and install root barrier fabric in the manner shown on the Contract Drawings. The purpose of the root barrier fabric is to provide a permeable layer which allows water but not soil particles to pass through, and that inhibits growth of roots through the barrier.

4.18RB.2. MATERIALS. The root barrier shall be a permeable, heavy-duty, non-woven geotextile with integral, non-toxic root-inhibiting agent, as "Tex-R® Barrier" manufactured by Texel Inc., St-Eleazar-de-Beauce, PQ, Canada, (800)463-8929, www.texel.gc.ca; Biobarrier, as supplied by Reemay, Inc., Old Hickory, TN, (800)284-2780, www.biobarrier.com; or Root Shield as supplied by American Wick Drain Corporation, Monroe NC, (800)242-9425, www.americanwick.com or approved equivalent.

Adhesive shall be a heavy-duty, construction-grade, weather-resistant, rubber-based adhesive, such as Liquid Nails for Outdoor Carpet and Turf (AW-40) or approved equivalent.

4.18RB.3. SUBMITTALS. Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Provide product data, including catalog cuts and installation instructions for both root barrier fabric and adhesive, and minimum 4" x 4" sample of root barrier fabric material, for approval by the Engineer.

4.18RB.4. METHODS. Root barrier fabric shall be placed as shown on the Contract Drawings and in accordance with the manufacturer's directions. Fabric shall overlap a minimum of four inches (4"), and shall be secured by a liquid adhesive as specified above. Adhesion shall occur in a continuous line with no gaps in between. Installation shall be supervised by the Engineer.

Install root barrier over cleanly-prepared excavation free of objects which may puncture barrier, to minimum depths as defined in drawings. Care shall be taken in excavation over subway structure in conformance with requirements of Item 6.02 XSCE, Special Care Excavation Near Transit Facilities.

4.18RB.5. MEASUREMENT. The quantity of Root Barrier Fabric to be measured for payment shall be the number of square yards actually installed in place, computed between the limits shown on the Contract Drawings or within the limits established in writing by the Engineer prior to performing the work.

No quantity will be included for material used for repair of tears or for material used at the overlaps.

4.18RB.6. **PRICE TO COVER.** The unit price bid per square yard for this item shall include the cost of furnishing all labor, materials, plant, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, the cost of preparing the surface upon which the Root Barrier Fabric is placed; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
4.18 RB	ROOT BARRIER FABRIC	S.Y.

SECTION 6.04 DG
Decorative Gravel

6.04DG.1. DESCRIPTION. This section describes the furnishing and placing of **DECORATIVE GRAVEL** for use as fill material at tree grates and in gap between viaduct building and adjacent pavers/masonry, all in accordance with the Contract Drawings and the directions of the Engineer.

6.04DG.2. MATERIALS.

- (A) **DECORATIVE GRAVEL:** Unless otherwise specified, decorative gravel shall be crushed material composed of granite, and shall be dark grey in color matching granite steps as described in **SECTION 9.95 G**, herein Volume 3 of 3.
- (B) Material shall be crushed granite per AASHTO #57, free from clay lump, organic or other deleterious material. Fines shall be evenly mixed throughout the aggregate. Screenings shall be graded within the following limits:

<u>Passing Sieve (Dry Analysis)</u>	<u>Percent by Weight</u>
No. 200	0-2%
No. 8	0-5%
No. 4	0-10%
1/2"	25-60%
1"	90-100%
1-1/2"	100%

The Engineer reserves the right to reject on or after delivery any material, which does not, in his opinion, meet these specifications.

- (C) **SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Submit a three (3) pound bag of Decorative Gravel to the Engineer for approval, along with a sieve analysis and the name of the supplier.

6.04DG.3. METHODS. After adjacent stonework and paver installation is complete, the Decorative Gravel shall be carefully placed in the 3" wide gap between the existing building and the adjacent pavers and/or masonry, where shown on the Contract Drawings. The entire cavity between the paver restraint or masonry and the building will be filled with gravel. Finish grade of the decorative gravel shall be flush with top of the adjacent pavers and/or masonry.

With fog nozzle water lightly but thoroughly, pressure should not disturb leveled surface.

Any significant irregularities shall be smoothed out prior to final

acceptance of work.

6.04DG.4. MEASUREMENT. The quantity of to be paid for under this item shall be the actual number of square yards of **DECORATIVE GRAVEL** placed at the site to the satisfaction of the Engineer.

6.04DG.5. PRICE TO COVER. The unit price bid per square yard of **DECORATIVE GRAVEL** shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.04 DG	DECORATIVE GRAVEL	S.Y.

SECTION 6.06 GS
Granite Slab Sidewalk (Mortar Setting Bed)

6.06GS.1 DESCRIPTION. This work shall consist of carefully removing, cleaning, storing, and resetting existing granite slab sidewalk as required to install pedestrian ramps.

6.06GS.2. MATERIALS.

- (A) Where new granite slabs are required to replace damaged or missing slabs, they shall meet the requirements for granite under **Section 2.06** of the NYCDOT Standard Highway Specifications, except that granite slabs shall be of the dimensions to match the existing, shall have sawed tops and sides, with a thermal finish on the top face, and no depressions exceeding 3/16 inch on the top face when measured with a straight edge laid in any direction, unless otherwise required to match the existing. The bottom face may be sawn or quarry split. Granite Slabs shall be from the same quarry as the existing slab.

Color shall be gray unless otherwise required to match the existing.

No drill holes or bull wedge marks shall be permitted in the wearing surfaces of the granite slabs.

All granite slabs which do not comply with these specifications will be rejected.

- (B) Cement Mortar shall conform to **Section 3.07**, Type 2, of the NYCDOT Standard Highway Specifications, except for the proportion of Portland Cement and mortar sand: for setting bed it shall consist of one part Portland Cement Type 2 and two parts Mortar Sand by volume; and, for joints it shall be equal parts of Portland Cement and Mortar Sand by volume.
- (C) Prior to Commencement of Work, the Contractor shall submit the name of the granite slab installer he proposes to use and upon which his bid is based, along with their respective work history experience, and where new granite slabs are required, at least one sample of each different granite slab which he proposes to use in the project.

6.06GS.3. CONSTRUCTION DETAILS.

- (A) The Contractor shall carefully remove the existing granite slabs located within the corner quadrant where a pedestrian ramp is to be installed as shown on the Contract Drawings or directed by the Engineer. Existing granite slabs shall then be cleaned of adherent material, to the satisfaction of the

Engineer, and store at the site for relaying within the corner quadrant.

Removal and replacement of the existing base for granite slabs shall be done and paid for under Item 4.04 BPB, except that pigmenting of concrete will not be required and the surface of the concrete shall be finished at a depth equal to the thickness of the granite slabs plus 1-1/2 inch mortar for the setting bed.

- (B) Preparation of Surface. Before laying operations begin, the concrete base (Item 4.04 BPB) shall be thoroughly set if freshly poured. The concrete base shall be swept and cleaned of all dirt, loose and foreign matter, and be free of standing water. No granite sidewalk shall be laid unless the surface on which it is to be laid is in a condition acceptable to the Engineer. No granite sidewalk shall be laid or grouted in freezing weather. Moisten concrete base with water immediately before placing mortar but do not allow puddles of water.
- (C) Handling. All granite slabs shall be handled, piled and laid, as required. They shall be handled with care to prevent the chipping and breaking of edges and corners.
- (D) Mortar. Mortar for setting bed shall be composed of one part Portland cement and two parts sand. Mix mortar as stiff as practicable. Do not use mortar that has set up. Retempering of mortar will not be permitted.
- (E) Spreading and shaping of the Bed. The mortar setting bed shall be spread on the concrete base to a depth of one (1) to one and one-half (1-1/2) inches, be shaped by approved methods to a surface approximately parallel to and depth of the granite slab below the finished surface, and shall not be disturbed after shaping prior to the laying of the slabs.
- (F) Laying Granite Slabs. The foundation shall be brought to the required grade and the slabs shall be cut and laid on a mortar bed in the patterns shown on the Contract Drawings to provide a uniform surface. Carefully place granite slabs by hand in straight courses with joints not exceeding 1/4" but not less than 1/8", and with uniform top surfaces conforming to the patterns shown on the Contract Drawings. Slabs shall be laid on the bed before it has set. Each slab shall be thoroughly rammed and adjusted, and re-rammed if required until it is thoroughly and satisfactorily bedded to the proper grade and crown. No air pockets in mortar bed will be allowed.

The Contractor shall perform all necessary field cutting and dressing to have stones fit the required patterns and street hardware.

(G) Ramming Granite Slabs. Slabs shall have no sand or gravel placed in the joints and shall be rammed to a solid bearing with a rammer weighing not less than thirty (30) pounds handled by a skilled rammersman. Not less than one (1) rammersman shall be employed to three (3) pavers. Slabs that are found low shall be raised to a true and even surface by adding to the bed. Those found broken or otherwise unsatisfactory shall be removed by tongs and replaced by approved slabs. Pinch bars shall not be used in removing slabs.

(H) Cement-grout Joint Filler. The wearing course of slabs shall be sprinkled with clean water as directed. The cement-grout joint filler shall be flushed on the surface and worked into the joints with brooms, rubber edged squeegees, or other approved appliances. Joints shall be repoured, if necessary, before initial set has taken place until they are filled flush with the surface of the wearing course.

Cement-grout used for joints shall be colored with mineral oxide pigments to match the granite.

The amount of filler left on the surface of the wearing course shall be as little as possible and all surplus filler shall be satisfactorily removed.

(I) Sufficiency of Apparatus. The apparatus agitating the filler shall, in number and efficiency, be sufficient to permit the filler gang to closely follow the pavers or rammers, as the case may be, and in no case shall a wearing course be left overnight or when work is stopped without the joint filling being completed.

(J) Joint Filling in Cold or Wet Weather. During air temperature below 38 degrees Fahrenheit, in the shade, cement-grouting may be done only if permitted by the Engineer.

In case of rain the wearing course shall be protected as required.

(K) Testing Surface. After the wearing course has been laid, the surface shall be tested with an approved straight edge ten (10) feet long or with an approved surface testing machine laid parallel with the center line of the roadway and any irregularity in the alignment of granite slab pavement, exclusive of depressions in individual slabs, exceeding one-quarter (1/4) inch shall be immediately corrected to the satisfaction of the Engineer.

(L) Traffic. No traffic of any kind will be allowed on the granite pavement until permitted by the Engineer.

(M) Defective Wearing Course. Such portions of the completed sidewalk that are defective in finish, compression, composition, or that do not comply with the requirements of these specifications, shall be taken up, removed, and replaced with suitable materials, properly laid in accordance with these specifications at the Contractor's own expense.

6.06GS.4. MEASUREMENT. The quantity to be measured for payment shall be the number of square yards of Reset Granite Slab Sidewalk installed to the satisfaction of the Engineer, measured in place in its final position.

In determining the area of Reset Granite Slab Sidewalk to be paid for, areas occupied by detectable warning surfaces, bases of columns, manhole heads, gate boxes, and similar structures will be deducted from the measured area of granite slab sidewalk when they measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

6.06GS.5. PRICE TO COVER. The unit price bid per square yard of Reset Granite Slab Sidewalk (on Mortar Setting Bed) shall cover the cost of furnishing all labor, material, plant, equipment, insurance, and incidentals necessary to remove, clean, store, and relay existing granite slab sidewalk on mortar setting bed with mortar joints, complete, to match existing adjacent granite slabs, in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

The work shall also include, but not be limited to, salvaging of all existing granite slabs, furnishing additional granite slabs as replacement for slabs which are broken or damaged during the Contractor's removal and cleaning operations. No additional payment will be made for replacement of granite slabs that are broken, damaged or missing.

The cost of excavation and replacement of the existing subbase course, as may be required, will be paid for under Item 4.04 BPB.

Payment will be made under:

Item No.	Item	Pay Unit
6.06 GS	RESET GRANITE SLAB SIDEWALK (ON MORTAR SETTING BED)	S.Y.

SECTION 6.28 ME

Lighted Timber Fencing for use in Lower Manhattan Project

6.28ME.1. INTENT. This section describes the work to be done in connection with Lighted Timber Fencing.

6.28ME.2. DESCRIPTION. The Contractor shall furnish, install, and maintain and remove, when directed, Lighted Timber Fencing at locations shown on the Contract Drawings, as specified herein and where directed by the Engineer.

6.28ME.3. MATERIALS.

Timber and lumber shall be dense, structural grade Douglas Fir or Southern Yellow Pine, conforming to the requirements of Section 2.40 of the Standard Highway Specifications.

Reflectorizing materials shall conform to the requirements of ASTM Designation B 589 "Standard Specification of Refined Palladium."

Battery operated flashing units shall be as approved by the Engineer.

For additional details about materials see the sketch for timber fencing.

All other unspecified materials shall be as approved by the Engineer.

6.28ME.4. METHODS. Lighted Timber Fencing as shown in the attached sketch shall be furnished, installed and maintained where shown on the Contract Drawings and as directed by the Engineer. This requirement shall be in addition to providing all other traffic control devices as deemed necessary for the maintenance and protection of vehicular and pedestrian traffic.

Said work shall include the furnishing and incorporation, as required, of all timber, lumber, fastenings, anchors, reflectorizing materials, battery operated flashers and other warning devices; paint and painting; netting; and the furnishing of all labor, materials, plant, equipment, insurance, and necessary incidentals required and completing the work.

Fencing at all times shall be maintained in a condition satisfactory to the Engineer. Maintenance shall consist of the replacement of all damaged or worn out components; repainting, as required or directed; replacement of reflectorizing materials, netting and flashers; and general rehabilitation to keep barricades in good condition during the life of the contract.

At the completion of the work or when directed by the Engineer, fencing shall be removed and disposed of away from the work site.

6.28ME.5. MEASUREMENT AND PAYMENT. The quantity to be measured for payment shall be the number of linear feet of lighted timber fencing installed in the work, complete, based on the summation of the lengths of individual units, measured along the center line on the face of the top rail between the ends of each unit.

Payment will be made for lighted timber fencing only for the initial installation at any location. Whenever fences are moved to a new location, as required by the Contract Drawings or directed by the Engineer, payment will be made in the same manner as if it were an initial installation. Minor movement of the fencing from one side of the roadway to the other side, or rearrangement within a work area will not be considered as a movement to a new location and will not entitle the Contractor to additional payment.

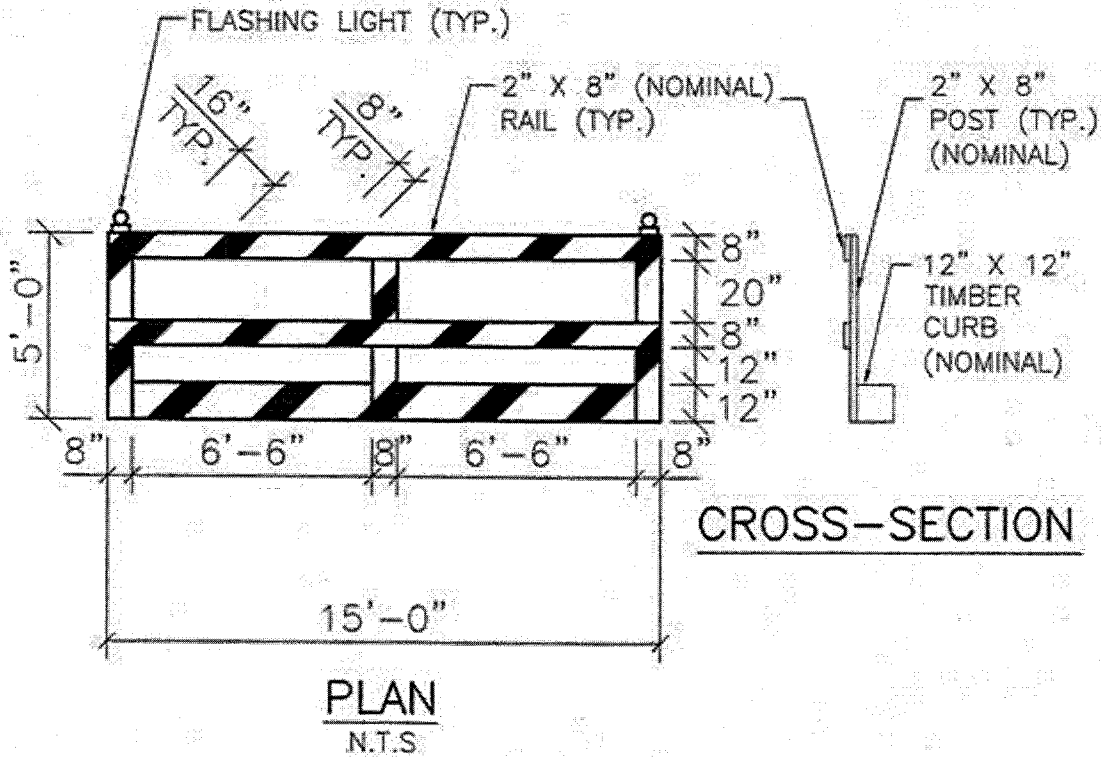
No payment will be made: for movements of fencing made for the Contractor's convenience; for movement of fencing at a given location at the end of a work period and subsequent replacement at the same location at the beginning of the next work period; for movement of fencing at a given location during a work period and subsequent replacement at the same location during the same work period; or for the interchanging of fencing between initial installations.

6.28ME.6. PRICES TO COVER. The contract prices bid per linear foot for lighted fencing shall cover the cost of furnishing all labor, materials, plant, equipment, insurance, and necessary incidentals required and completing the work in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Description	Pay Unit
6.28 ME	LIGHTED TIMBER FENCING FOR USE IN LOWER MANHATTAN PROJECT	L.F.

LIGHTED TIMBER FENCING FOR USE IN LOWER MANHATTAN PROJECTS



DETAILS:

- 1) LUMBER -DOUGLAS FIR OR SOUTHERN YELLOW PINE.
-ALL SIZES SHOWN ARE "NOMINAL".
-ALL CONNECTIONS FOR TIMBER RAILS, POSTS & CURBS TO BE NAILED.
- 2) PAINT -TWO COATS APPROVED ORANGE & STAIN RESISTANT REFLECTORIZED WHITE.
-STRIPES TO BE 45° WITH 8" ORANGE & 16" WHITE.
- 3) LIGHTS -BATTERY OPERATED OR SOLAR POWERED FLASHING DOT APPROVED TYPE.
-MAXIMUM SPACING 15' CENTER TO CENTER.
- 4) NETTING -TYPE SHALL BE POLYETHYLENE KNITTED MESH, 3.5 OZ PER SQUARE YARD, ORANGE COLOR, 5'-6" HEIGHT WITH REINFORCED EDGE, OR APPROVED EQUAL.
-NETTING TO BE FASTENED TO FENCE EXTERIOR OVER THE ENTIRE 5'-0" HEIGHT.

SECTION 6.34 ACTP
Temporary Chain Link Fence, 6'-0" High

6.34ACTP.1. DESCRIPTION. Under this section, the Contractor shall furnish, erect, maintain, and remove, when directed, each type of Temporary Chain Link Fence as shown on the Contract Drawings and directed by the Engineer.

6.34ACTP.2. MATERIALS AND METHODS. All materials and methods shall be as specified in Section 6.34 of the Standard Highway Specifications, with the following modifications and additions:

Temporary Chain Link Fence to be furnished under Item 6.34 ACTP, shall consist of chain link fence fabric, top and bottom rails for mounting a decorative mesh (to be furnished under another item), gates, posts with steel plate footings, sand bags to hold fence in place, and all necessary incidental in accordance with the Contract Drawings and the directions of the Engineer.

When directed by the Engineer, the Contractor shall remove and dispose of the temporary chain link fence to the satisfaction of the Engineer. The Contractor shall then fill any holes left in the pavement with compacted clean sand to grade.

6.34ACTP.3. MEASUREMENT. The quantity of Temporary Chain Link Fence to be measured for payment shall be the number of linear feet of fence satisfactorily installed, complete, measured in place, from center to center of end posts.

6.34ACTP.4. PRICE TO COVER. The price bid for Temporary Chain Link Fence shall be a unit price per linear foot and shall cover the cost of all labor, materials, plant, equipment, insurance, and necessary incidentals required to furnish, install, maintain, and remove temporary chain link fence; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer. Temporary chain link fence shall also include, but not limited to, any gates as may be required.

Payment will be made under:

Item No.	Description	Pay Unit
6.34 ACTP	TEMPORARY CHAIN LINK FENCE, 6'-0" HIGH, (WITH TOP AND BOTTOM RAILS AND POSTS MOUNTED ON STEEL PLATES)	L.F.

SECTION 6.47 PCB
Furnish and Install Concrete Pavers

6.47PCB.1. Intent. This section describes the furnishing and installation of both permeable concrete pavers and impermeable concrete paver bands for the dining terrace areas of the plaza as shown on the Contract Drawings and directed by the Engineer.

6.47PCB.2. MATERIALS.

(A) The pavers shall be concrete with special surface composition designed for durability and stain-resistance. Horizontal dimensions of paver units shall be as indicated on the Contract Drawings. Minimum thickness for permeable pavers shall be 3". Minimum thickness of non-permeable pavers shall be 2.7". All pavers shall have a minimum compressive strength of 7,000 psi.

Basis of Design: Products shall be "Eco-Priora" for permeable pavers and "Select" for non-permeable paver bands, both "Midnight Sky" in color with "Umbriano" finish, as manufactured by Unilock New York.

Acceptable Manufacturers are:

1. Hanover Architectural Products
240 Bender Road
Hanover, PA 17331
Tel. (717) 637-0500
www.hanoverpavers.com
2. Pavestone
18 Cowan Drive
Middleboro, MA 02346
Tel: (508) 947-6001
www.pavestone.com
3. Unilock New York
51 International Blvd.
Brewster, NY 10509,
Tel: (845) 278-6700
www.unilock.com
4. or approved equivalent.

(B) Crushed Stone Filler and Bedding shall be Type 2 conforming to the grading requirements of ASTM C 33, No. 8 in accordance with **Section 2.02** of the NYCDOT Standard Highway Specifications.

Base Aggregate shall be Type 2 conforming to the grading requirements of ASTM C 33, No. 57 in accordance with **Section 2.02** of the NYCDOT Standard Highway Specifications.

Subbase Aggregate shall be Type 2 conforming to the grading requirements of ASTM C 33, No. 2 in accordance with **Section 2.02** of the NYCDOT Standard Highway Specifications.

- (C) **SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. The Contractor shall submit a statement of compliance with the requirements of Quality Control section below, a copy of installer certification, a list of installer's projects and locations, and photographs of at least 5 previous installations. The Contractor shall submit product data for each paver type. The Contractor shall submit four sample pavers of each type and shape clearly identified by the manufacturer's name, date of production and contract number and these sample pavers shall represent the range of colors to be produced, the size, shape, intensity, and surface texture of the blocks he plans to use in the work. Blocks with discolorations, cracks, honeycombs, or other similar surface irregularities shall not be considered acceptable for the work or as samples. The Contractor shall hand deliver samples to Department of Design and Construction, 30-30 Thomson Avenue, Long Island City, NY 11101 with transmittal letter and obtain a signed receipted acceptance of delivery. There shall be no material delivery to job site without prior written approval from the Engineer; all material delivered to site without such approval will be rejected. Contractor shall submit samples in sufficient time as to not delay progress of Construction.
- (D) **MOCK-UP.** The Contractor shall install an initial 10' x 10' mock-up in an area approved by the Engineer that incorporates all paver types and conditions required for the full installation. If necessary the mock-up shall be reinstalled until it is approved by the Engineer. This area shall be used as the standard by which the work will be judged. Subject to acceptance by the Engineer, mock-up may be retained as part of finished work. If mock-up is not retained, remove and properly dispose of mock-up.

6.47PCB.3. METHODS.

QUALITY CONTROL. The Company performing this work shall have installation of concrete pavers representing a substantial proportion, if not a majority, of its regular work. The installer shall hold a current Concrete Paver Installer Certification certificate from the Interlocking Concrete Pavement Institute. Only full crews shall be permitted to install pavers. Under no circumstances shall one or two man crews be permitted to install pavers.

The Contractor shall remove from the subgrade all debris, foreign material, and all other undesirable material designated by the Engineer. The graded surface shall not be muddy or otherwise

unsatisfactory when material is placed upon it. If the graded surface becomes rutted or displaced, due to any cause whatsoever, the Contractor shall regrade same without additional cost to the City.

Subbase and Base Aggregates for pavers shall be installed at proper elevation to accept pavers and crushed stone bedding. Before any pavement is placed upon the graded surface, the surface shall be prepared to line and grade and compacted to a minimum of 95% standard Proctor density per ASTM D698. All hollows and depressions shall be filled with acceptable material and shall again be compacted. This process of shaping, filling, and rolling shall be repeated until no depressions develop. Provide written density test results for soil subgrade to the Engineer.

Prior to placing the subbase and base aggregates, the finished subgrade surface shall not extend above the design elevation at any location and filter fabric material shall be furnished and installed in accordance with **Section 6.68** of the NYCDOT Standard Highway Specifications on the prepared surface.

Subbase and base aggregates shall be evenly spread on a prepared subgrade in the position shown on the Contract Drawings or directed by the Engineer, in four inch (4") layers, each layer to be rolled while wet with a seven (7) to twelve (12) ton tandem roller (or other approved method satisfactory to the Engineer), to the thickness shown on the Contract Drawings or as directed by the Engineer.

Pavers shall be laid on a compacted two (2") inch crushed stone bedding, in straight courses with hand tight joints and uniform top surfaces, keeping good alignment and starting rows alternately with full and half pavers, or according to pattern shown on the Contract Drawings. Newly laid pavers must be protected at all times by panels of plywood on which the paver stands. These panels can be advanced as work progresses; however, the plywood protection must be kept in areas which will be subjected to the continued movement of material and equipment. These precautions must be taken in order to avoid depressions and protect paver alignment.

Pavers shall also be adequately protected from discoloration, due to adjacent paving operations, by an approved method.

Permeable and impermeable pavers shall be placed at right angles to the adjacent building face, except where indicated on the Contract Drawings. Alignment shall be verified periodically.

Pavers shall be arranged with the rows touching so that the "ends" of the pavers will form the proper corresponding angle and the proper distance between "ends" not to exceed 1/8 inch. Joints between the pavers shall be maintained according to the unit integral spacer bars. Where pavers must be cut to abut adjacent

edges, paver banding, or stair handrail supports per layout plans, edges shall be cut to achieve clean straight or curving lines as required by the Contract Drawings, with hand tight joints.

A plate vibrator shall be used to compact and level the pavers after they have been installed. It is important that the correct type and size compactor be used.

After the pavers are laid, crushed stone filler is to be swept into the joints until the joints are filled.

All uncompleted edges and end of pavers shall be adequately braced and/or retained at the end of each work-day with temporary asphaltic concrete mixture or other approved method.

All cutting and setting of pavers shall progress with the setting operation. Under no circumstances shall areas requiring cut pavers be permitted to remain at the end of each work day.

After a sufficient area of pavement has been laid, the pavement shall be tested with a ten foot straight edge and any depressions exceeding one-quarter (1/4") inch shall be corrected and brought to proper grade. Any pavers disturbed in making replacements or correcting depressions shall be settled into place by ramming.

To allow for settlement, the surface elevation of pavers shall be three-sixteenth (3/16") inch above adjacent drainage inlets or adjacent granite walking surfaces.

6.47PCB.5. MEASUREMENT. The quantity to be measured for payment shall be the number of square feet of Concrete Pavers actually installed to the satisfaction of the Engineer, measured in place. In determining the area of pavers or to be paid for, the areas occupied by bases of columns, manhole heads, gate boxes, road boxes and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

6.47PCB.6. PRICE TO COVER. The unit price bid per square foot for Furnish and Install Concrete Pavers shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish and install both permeable and impermeable concrete pavers in designated areas. The unit price bid shall also include, but not be limited to, the cost of furnishing and installing filter fabric, subbase aggregate, base aggregate, crushed stone bedding, and joint filler; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.47 PCB	FURNISH AND INSTALL CONCRETE PAVERS	S.F.

SECTION 6.74 B
Bronze Edging and Veneer

6.74.B.1. DESCRIPTION: This section describes fabrication and installation of Bronze Raised Edging and Bronze Veneer.

- (A) **BRONZE RAISED EDGING:** Under this item, qualified fabricators and installers shall procure materials, fabricate all necessary components including edging and anchoring elements for all installation conditions, install edging, and finish all exposed surfaces.
- (B) **BRONZE VENEER:** Under this item, qualified fabricators and installers shall procure materials; fabricate all necessary components including veneer, perforated opening and sheet drain at trench drain channel outlet, and anchoring elements; install all veneer and other fabricated components, and finish all exposed surfaces.

6.74.B.2. MATERIALS.

Fabricated Bronze Elements: Rod, bar, and sheet stock shall be C385 Architectural Bronze.

Fabricated Stainless Steel Elements: Shall be AISI Type 316.

Setting concrete for shallow installation: Shall be a packaged, two-component, shrinkage-free, self-curing, high-strength, cement-based topping screed mortar suitable for horizontal exterior applications, with the following minimum characteristics:

- Compressive Strength ASTM C 109 - Greater than 6,000 psi
- Flexural Strength ASTM C 348 - Greater than 1,500 psi
- Slant / shear bond strength ASTM C 882 - Greater than 1,450 psi
- Volume change ASTM C 157 - +0.015%
- Freeze / thaw resistance ASTM C 666-A - 100%
- Resistance to de-icing salts ASTM C 672 - 0 rating, no scaling.
- Permeability to chlorides ASTM C 1202 - very low, in the range of 100 to 1000 coulombs.

Fastening devices: shall be stainless steel, AISI Type 316.

Welded Wire Mesh reinforcement: shall be 1" x 1" grid, 1/16" diameter wire.

6.74.B.3. QUALITY CONTROL.

Quality Control: Except as modified by governing codes and by this Specification, the Contractor shall comply with the applicable provisions and recommendations of the AWS "Structural Welding Code" including all supplements, addenda and special rulings applicable to building construction. All welding in the shop or field shall be subject to controlled inspection of the NYC Building Code.

Fabricator and installer shall demonstrate prior experience with fabrication of similar bronze elements incorporating braze-welding of bronze components to bronze and to stainless steel.

Tolerances: Maximum variation from flush conditions for all elements shall be 1/16". Maximum variation in horizontal alignment from true dimensions for shall be 1/4". Maximum variation from true vertical alignment shall be 1/4". Maximum variation in horizontal alignment where abutting granite shall be maintained within 1/8" in either direction.

Protection: Store product in manufacturer's packaging until ready to install.

Warranty: Gratings and frames shall be warranted by the manufacturer against defects in materials and workmanship for a minimum of five (5) years.

6.74.B.4. SUBMITTALS.

Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.

- (A) Qualifications: Submit statement of compliance with Quality Control section above, including qualifications for all fabricators and installers with images and address locations of previous similar installations of bronze fabrications.
- (B) Shop Drawings: Shop Drawings shall be submitted at the scale of 1" = 1'-0" for plans and elevations, and 3" = 1'-0" or larger for detailed cross-sections. Shop drawings shall take into account field measurements for horizontal and vertical alignment, and shall indicate typical weld types for each installation condition. All shop drawings for items under this Section shall be coordinated and submitted concurrently.
- (C) Product Data: Submit product information for all fabricated metals, welding materials, anchor devices, and setting materials. All product data shall be submitted concurrently with samples.

- (D) Samples: Submit sample of specified alloy for bronze bar and sheet stock. Sample size shall be minimum 6 square inches. Sample sheet thickness shall be minimum 0.25" thickness.
- (E) MOCK-UP. Fabricate at the earliest possible time before proceeding with work and after approval of submitted samples and product data. The mock-up/sample must be as approved by Engineer before the actual work may proceed. If necessary refabricate until approved by the Engineer. Provide and construct a mock-up of a minimum one (1) square foot of Bronze Veneer incorporating thickened top section, anchors, and portion of perforated opening for drainage channel, all welded as per Contract Drawings and specifications, with specified finish. Clear digital photographs of mock-ups shall be submitted for review prior to physical submission of the mock-up. Digital photographs of mock-up shall be submitted not less than one month prior to scheduled installation.

6.74.B.5. METHODS.

Workmanship shall be in accordance with AISC Specifications and as specified herein. Temporary bracing shall be provided wherever necessary during assembly and erection, and shall be left in place as long as required. It is the Contractor's responsibility for safe practice in this regard. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Install bronze elements after danger of damage from construction traffic has past.

Examine the areas and conditions where the edging is to be installed. Notify the Engineer of any conditions detrimental to the proper installation and subsequent use, and timely completion of the work. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work. Verify in writing.

All elements shall be fabricated in strict accordance with the Contract Drawings and shop drawings. Curved elements shall be formed to accurate radii and alignment per layout plans, and shall incorporate slopes based on grading plans and verified by field measurements. All joints shall be completely welded with welds of proper size and shape, all welds ground smooth to a neat finish. Connection shall be provided as indicated on the Contract Drawings. Face of Bronze Veneer shall be set plumb, and top shall be set flush with required finish grade of adjacent grating, granite and pavers. The top of Raised Edging shall be of a constant height following parallel with the required finish grades. Return on Bronze Raised Edging at drinking fountain shall be fabricated based on field measurements of installed fountain, with no more than 1/8" gap between fountain housing and Raised Edging.

Where welding of bronze is indicated on drawings or specifications, such welding, either to other bronze elements or to stainless steel, shall be understood to be "braze-welding". Veneer and raised edging shall be shop-cut and formed to allow accurate setting and proper alignment, meeting topographic elevations per grading plans and shop drawings. Do not begin welding until joint elements are bolted in intimate contact and adjusted to dimensions with allowance for any weld shrinkage that is expected. All bronze-to-bronze and bronze-to-stainless steel welds shall be minimum 1/4" fillet weld brazing. Weld stainless steel-to-stainless steel sections with low hydrogen-type electrodes. No members are to be spliced without prior review by the Engineer. Stainless steel angles and bronze clips shall be shop-welded to bronze edging and veneer. All welds on exposed surfaces shall be ground smooth before finishing. If cracks of any size appear in installed items, the components shall either be repaired in the field or removed and refabricated as necessary to remediate cracking, at the discretion of the Engineer.

All exposed edges of bronze shall be eased to a consistent 1/16" radius.

All exposed surfaces of fabricated Architectural Bronze C385 shall be finished with a non-directional satin finish. No coatings or patina of any kind shall be applied. Where abraded or scuffed, the finish shall be fully restored to the satisfaction of the Engineer at time of Substantial Completion.

Raised Edging and Veneer shall be accurately set in place, properly aligned, and anchored securely per Contract Drawings and shop drawings.

Where indicated on Contract Drawings, raised edging shall be installed in shallow setting conditions using specified setting concrete for shallow installation, with wire mesh reinforcing. Materials and labor for shallow installation shall be included in the cost for raised edging.

6.74.B.7. MEASUREMENT. The quantities to be measured for payment shall be:

- (A) BRONZE RAISED EDGING: The number of linear feet of raised edging actually installed at the site to the satisfaction of the Engineer.
- (B) BRONZE VENEER: The number of square feet of veneer actually installed at the site to the satisfaction of the Engineer. No additional payment shall be made for perforated opening and sheet drain at trench drain channel outlet.

6.74.B.8. PRICES TO COVER.

- (A) BRONZE RAISED EDGING. The unit price bid per linear foot for Bronze Raised Edging shall cover the cost of all labor, materials, fabrication, equipment, insurance, and necessary incidentals required to complete work of furnishing and installing bronze raised edging; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

- (B) BRONZE VENEER. The unit price bid per square foot for Bronze Veneer shall cover the cost of all labor, materials, fabrication, equipment, insurance, and necessary incidentals required to complete work of furnishing and installing bronze veneer including, but not limited to, all setting, anchoring, finishing, and sealing; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.74 BE	BRONZE RAISED EDGING	L.F.
6.74 BV	BRONZE VENEER	S.F.

SECTION 6.74 PR
Paver Restraint System

6.74PR.1. DESCRIPTION. Under this Section, the Contractor shall furnish and place a paver restraint system for concrete pavers that incorporates a metal edge anchored with a polypropylene geogrid apron laid under the pavers. The items under this section shall be as follows:

- (A) ITEM 6.74 PRE, PAVER RESTRAINT EDGE. This item shall consist of furnishing and delivering a paver-restraining metal edge. Installation of the paver restraint edge shall be paid for under Item 6.74 PRA, Paver Restraint Anchorage.
- (B) ITEM 6.74 PRA, PAVER RESTRAINT ANCHORAGE. This item shall consist of paver restraint anchorage which shall include the required width of geogrid apron, capture plate and all hardware as required to anchor a metal paver edge, and shall include complete installation of the metal paver edge in conjunction with adjacent concrete pavers. The metal edge shall be the Item 6.74 PRE.

6.74PR.2. MATERIALS. Metal Edge Restraint shall be a product manufactured for use as paver restraint. The edge metal restraint shall be corrugated L-shape in profile, of thickness varying between 0.065 inch and 0.085 inch, 1-3/4 inches high extruded aluminum, 6063 alloy, suitable for straight-line and curvilinear applications. Horizontal base shall have holes spaced 4 inches apart along its length to receive spikes. Metal edge restraint shall be provided in minimum 8' lengths. Section ends shall be fabricated to connect together with galvanized steel clip. Metal Edge Restraint shall be finished with a black, electrostatically baked-on acrylic paint.

Geogrid: Shall be polypropylene fabric of triangular grid pattern, between 1.1 and 1.2 millimeters in thickness, resistant to chemical degradation, ultraviolet light, and weathering. Grid segments shall be of equal length in all three directions, and shall measure between 1.5" and 1.75" in length.

Capture Plate: Shall be 3" x 10" Type 6061 Aluminum, with pre-drilled holes to receive screws.

Screws: Shall be 1/4" x 1-1/4" hex washer, self-tapping stainless steel screws.

Connectors: Connectors between Metal Raised Edge sections shall be 0.030 inch thick x 1.25 inch wide x 0.75 inches tall galvanized steel clips.

6.74PR.3. SUBMITTALS. Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway

Specifications. Installer must demonstrate prior experience with installation of paver restraint system that utilizes geogrid for anchorage.

Submit photograph, address, and reference contact information for previous installations.

Submit product data for all components of the system. Submit sample as required for one (1) linear foot of complete paver restraint system as required for complete installation of Items 6.47 PRE and 6.47 PRA.

6.74PR.4. METHODS. Installation shall be in conformance with manufacturer's instructions. Prepare subbase and base course as required for paver installation. Place four (4') foot minimum width geogrid of required length over base course along perimeter. For angles, cut the geogrid apron to fit within the area. Set metal edge (base away from pavers) over geogrid along perimeter. Fill gaps under metal edge with base material to provide proper support. Connect sections using galvanized steel clips. Slide capture plates under the metal edge base and geogrid. Align the inside edge of the capture plate approximately in line with the vertical wall of the metal edge. Capture plate must overlap the base of adjacent sections of metal edge. Fasten metal edge to the capture plates. Fasten each plate with two screws, tightening to securely compress the geogrid between the edging and capture plates. Space capture plates equidistant along the edging section using 5 plates per eight foot section of edging. Install setting course and concrete pavers per **Section 6.47 PCB, FURNISH AND INSTALL CONCRETE PAVERS.** Backfill perimeter with materials as indicated on the Contract Drawings.

6.74PR.5. MEASUREMENT.

- (A) PAVER RESTRAINT EDGE. The quantity to be measured for payment shall be the number of linear feet of metal edge delivered to the job site, to the satisfaction of the Engineer.
- (B) PAVER RESTRAINT ANCHORAGE. The quantity to be measured for payment shall be the number of linear feet of metal edge anchored in place, to the satisfaction of the Engineer.

6.74PR.6. PRICES TO COVER.

- (A) PAVER RESTRAINT EDGE. The unit price bid per linear foot for Paver Restraint Edge shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish and deliver the Paver Restraint Edge to the project site.

Paver Restraint Edge installation will be paid under Item 6.74 PRA, Paver Restraint Anchorage.

- (B) PAVER RESTRAINT ANCHORAGE. The unit price bid per linear foot for Paver Restraint Anchorage shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to furnish and install Paver Restraint Edge in designated areas. The unit price bid shall also include, but not be limited to, the cost of furnishing and installing geogrid, capture plates, and fasteners; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.74 PRE	PAVER RESTRAINT EDGE	L.F.
6.74 PRA	PAVER RESTRAINT ANCHORAGE	L.F.

SECTION 6.97 A
Extra-High-Early Strength Concrete Base

6.97A.1. DESCRIPTION. This section describes the construction of an extra-high-early strength concrete base for pavement.

In intersections where the street must be fully opened to traffic by the end of each work period, in accordance with the contract drawings, the specifications, the traffic stipulations, and the directions of the Engineer, the concrete base shall be laid with an extra-high-early strength concrete base.

The Contractor will be subject, under **Section 6.70** of the Standard Highway Specifications, to liquidated damages in the amount shown on Schedule "A" for each and every hour, or any part thereof, that the entire width of pavement designated to be reconstructed with extra-high-early strength concrete base is not available to traffic one (1) hour after the end of each work period.

6.97A.2. MATERIALS AND METHODS. All materials and methods for the concrete base shall comply with the requirements specified for Item 4.04 H, except for the following modifications and additions:

- (A) Concrete shall be extra-high-early strength capable of obtaining a minimum compressive strength of 2,800-psi in six (6) hours, a minimum compressive strength of at least 3,200-psi at 3-days, and a sufficient size work crew and working time before its initial set to allow for proper placement of the concrete. Modification of concrete shall be with either an increased cement factor (10-bag mix of Portland cement), a reduced water content, superplasticizer, and accelerator or an approved Type IP hydraulic cement complying with the requirements of ASTM C595 modified with additives meeting the requirements of ASTM C688.
- (B) A suggested mix design and test results are attached at the end of this section. Should the Contractor propose to use this mix design the Contractor shall be required to verify that the Contractor's mix agrees with the first 28-days of the attached test results. Otherwise, if the Contractor chooses to use another mix design, the Contractor shall be required to document the Contractor's proposed mix design for 28-days in the same manner as shown on suggested mix design and test results which are part of the eleven (11) pages of attachments (Suggested Mix Design For Extra-High-Early Strength Concrete Base) to the end of this **Section 6.97 A**.
- (C) The laboratory used to verify that the Contractor's mix agrees with the mix design proved herein, or document another proposed mix design, shall be subject to approval by DDC's Quality Assurance and Construction Safety (QACS) Bureau and shall be 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 laboratory must have the current AMRL/AASHTO R-18 accreditation in the category of service proposed, it must be currently licensed by the NYC Department of Buildings (DOB), and it must have documented experience estimating concrete strength by the use of Maturity Meters. In addition, all testing requirement to verify that the Contractor's mix agrees with the mix design proved herein, or document another proposed mix design, shall be witnessed by a representative of DDC's QACS Bureau.

- (D) Prior to all work under this contract, the Contractor shall file with the Engineer Age-Strength data sheets of the job mix formulas for each type of concrete the Contractor proposes to use, for various ambient temperatures anticipated during the work period. These data sheets shall be used in determining the curing periods of the concrete used. Data sheets are to be presented in both tabular and graphical forms for various ambient temperatures with a maximum setting period of six (6) hours.
- (E) All materials and equipment to be used by the Contractor shall be as approved by the Engineer.
- (F) The earth subgrade, immediately before the concrete base is laid, shall be thoroughly compacted by an approved method, to the satisfaction of the Engineer. It shall be smooth, finished to the bottom elevation of the adjacent concrete base pavement, and be dampened with water sufficient only to be absorbed by the subgrade. The subgrade shall not be in a muddy or frozen condition and unsuitable material shall be removed and replaced with acceptable material, thoroughly compacted.
- (G) All constituents of concrete shall be delivered to the project site each work period as required. The Contractor shall supply concrete at a rate consistent with placement operations as determined by the Engineer. Concrete must be batched in sufficient quantity to prevent cold joints from being formed during placement. The Engineer may discontinue the use of any type of concrete mixing or transporting units when unsatisfactory results are obtained.
- (H) All concrete shall be discharged from the discharge openings directly into the forms or into approved conveyance equipment while fresh and before there is evidence of initial set. Concrete shall be deposited before the initial set has taken place, in as nearly a continuous operation as practical, and with approved tools which will prevent segregation. Concrete shall not be deposited in standing water and shall be thoroughly compacted by use of external vibration (poker nose of screed). No retampering of the concrete will be permitted.

Retampering is defined as the addition of water after the mix has attained its desired initial slump.

- (I) Concrete cylinders shall be taken at each location of work, as directed by the Engineer, to be tested the same day by the City.
- (J) No traffic is to be permitted on newly placed concrete base until it has obtained the minimum 2,800-psi compressive strength specified.

6.97A.3. MEASUREMENT. The quantity to be measured for payment under this item shall be the volume, in cubic yards, of extra-high-early strength concrete laid where directed by the Engineer, measured in place, and adjusted for strength deficiencies in accordance with **Section 5.04** of the NYCDOT Standard Highway Specifications.

In determining the volume of concrete to be paid for, the spaces occupied by bases of columns, manhole heads, gate boxes, road boxes, and similar structures will be deducted when their superficial areas measure more than one (1) square foot and will not be deducted when they measure one (1) square foot or less.

6.97A.4. PRICE TO COVER. The contract price per cubic yard of extra-high-early strength concrete shall cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to furnish, lay and cure the concrete, complete in place, in full compliance with the requirements of the specifications, to furnish such samples and cores for testing and to provide such testing equipment, laboratory space and facilities as may be required, to maintain the concrete base in good condition as specified in **Section 5.05** of the NYCDOT Standard Highway Specifications, and completing the work in accordance with the contract drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
6.97 A	EXTRA-HIGH-EARLY STRENGTH CONCRETE	C.Y.

SUGGESTED MIX DESIGN

FOR

EXTRA-HIGH-EARLY STRENGTH

CONCRETE BASE



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Client: Dept of Design & Construction Report #: 09DDC-95100 Page 1 of 2
 30-30 Thompson Ave. Date: 01/26/09
 Long Island City, N.Y. 11101 Mix #: 37
 Concrete Class: HE SuperPave Cementitious: 940 Type II

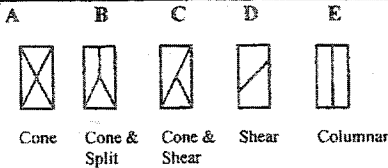
CONCRETE FIELD DATA (ASTM C192)

Cement lbs/ yd ³	Sand lbs/ yd ³	Stone lbs/ yd ³	Water lbs/ yd ³	Air Cont., %	Initial Slump in	Final Slump in	Concrete Temp, °F	Unit Wt. lbs/ yd ³	Ambient Temp °F	Water Temp °F
940	1035	1750	253.3	5.8	0	10.50	85	148.0	60	183

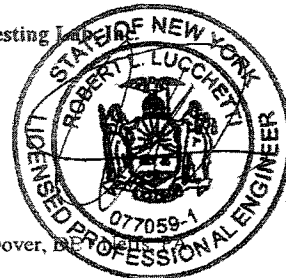
Supplier: CASA Ready Mix
 Sand: Roanoke-Washed / Specific Gravity: 2.63 – ASTM C33.
 Stone: Tilon Clinton Point / Specific Gravity: 2.81 – ASTM C33 #57
 Type I/II Cement: LaFarge – ASTM C150.
 Air: MBVR E90 65.8 oz/cu yd
 Plast. BASF 1390 112.8 oz/cu yd
 Accelerator: MBNC 534 846

COMPRESSIVE STRENGTH OF CONCRETE TEST CYLINDERS (ASTM C39) (4" D x 8" H)

cid #	Date Cast	Date Tested	Age, Days	Cross-Sect. Area, (sq. in.)	Total Load (Lbs.)	Fracture Type	Strength (PSI)	°C Hrs Mat.	Cyl Temp °F	Complies
1	01/26/09	01/26/09	2h	12.57	765	B	61	65	89	
2	01/26/09	01/26/09	3h	12.57	4020	B	320	100	90	
3	01/26/09	01/26/09	3.5h	12.57	6725	B	535	114	104	
4	01/26/09	01/26/09	4h	12.57	12760	B	1015	138	109	
5	01/26/09	01/26/09	4h	12.57	15410	B	1226	140	109	
6	01/26/09	01/26/09	4 ½h	12.57	18640	D	1483	159	111	
7	01/26/09	01/26/09	5	12.57	24300	D	1933	182	114	
8	01/26/09	01/26/09	5 ½h	12.57	32495	D	2585	205	114	
9	01/26/09	01/26/09	6h	12.57	40475	D	3220	228	114	Y
10	01/26/09	01/26/09	6h	12.57	36520	D	2910	228	114	Y
11	01/26/09	01/26/09	7h	12.57	45400	D	3612	275	116	Y
12	01/26/09	01/27/09	7h	12.57	91780	D	7302	881	77	Y
13	01/26/09	01/27/09	7h	12.57	94510	D	7519	881	77	Y
14	01/26/09	01/28/09	2	12.57	107670	D	8565	1303	62	Y



Submitted By: Materials Testing Lab



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Client: Dept of Design & Construction
 30-30 Thompson Ave.
 Long Island City, N.Y. 11101

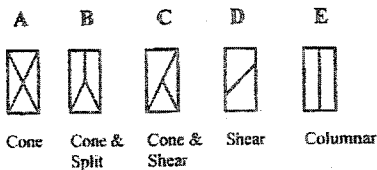
Report #: 09DDC-95100
Date: 01/26/09
Mix #: 37

Concrete Class: HE SuperPave

Cementitious: 940 Type II

COMPRESSIVE STRENGTH OF CONCRETE TEST CYLINDERS (ASTM C39) (4" D x 8" H)

Field #	Date Cast	Date Tested	Age, Days	Cross-Sect. Area, (sq. in.)	Total Load (Lbs.)	Fracture Type	Strength (PSI)	°C Hrs Mat.	Cyl Temp °F	Complies
15	01/26/09	01/28/09	2	12.57	102555	D	8160	1303	62	Y
16	01/26/09	01/29/09	3	12.57	108270	D	8610	1779	68	Y
17	01/26/09	01/29/09	3	12.57	101095	D	8040	1779	68	Y
18	01/26/09	01/30/09	4	12.57	115610	D	9200	2247	68	Y
19	01/26/09	01/30/09	4	12.57	112340	D	8940	2247	68	Y
20	01/26/09	02/02/09	7	12.57	110965	D	8830	3738	71	Y
21	01/26/09	02/02/09	7	12.57	114050	D	9070	3738	71	Y
22	01/26/09	02/02/09	7	12.57	108760	D	8650	3738	71	Y
23	01/26/09	02/09/09	14	12.57	124850	D	9930	7232	69	Y
24	01/26/09	02/09/09	14	12.57	121170	D	9640	7232	69	Y
25	01/26/09	02/09/09	14	12.57	121010	D	9630	7232	69	Y
26	01/26/09	02/23/09	28	12.57	132110	D	10510	14381	68	Y
27	01/26/09	02/23/09	28	12.57	130760	D	10400	14381	68	Y
28	01/26/09	02/23/09	28	12.57	127590	D	10150	14381	68	Y
29	01/26/09	03/23/09	56	12.57	144830	D	11520	-	-	Y
30	01/26/09	04/21/09	84	12.57	150210	D	11950	-	-	Y
31	01/26/09	04/21/09	84	12.57	147520	D	11740	-	-	Y



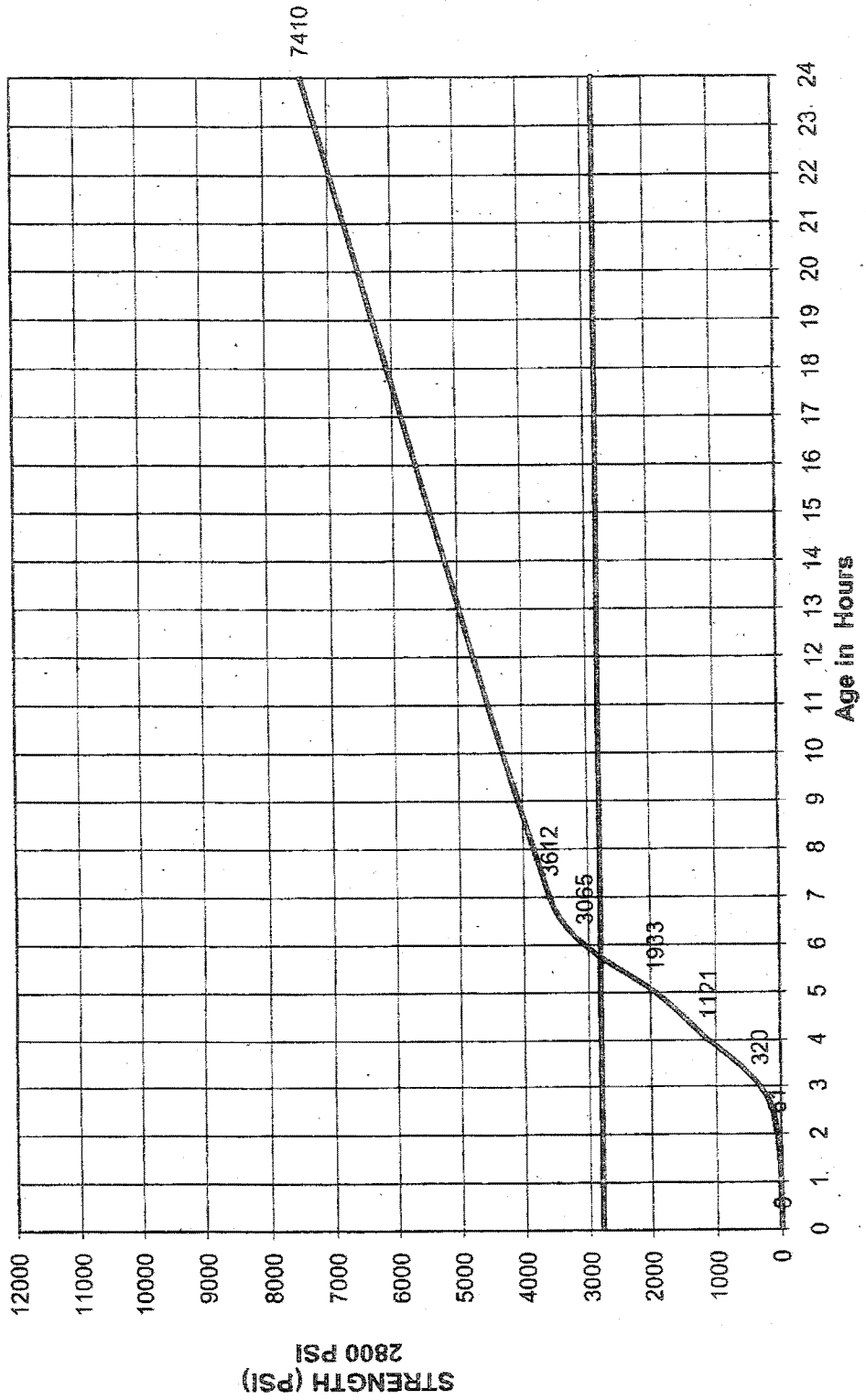
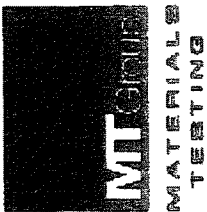
Submitted By: Materials Testing Lab



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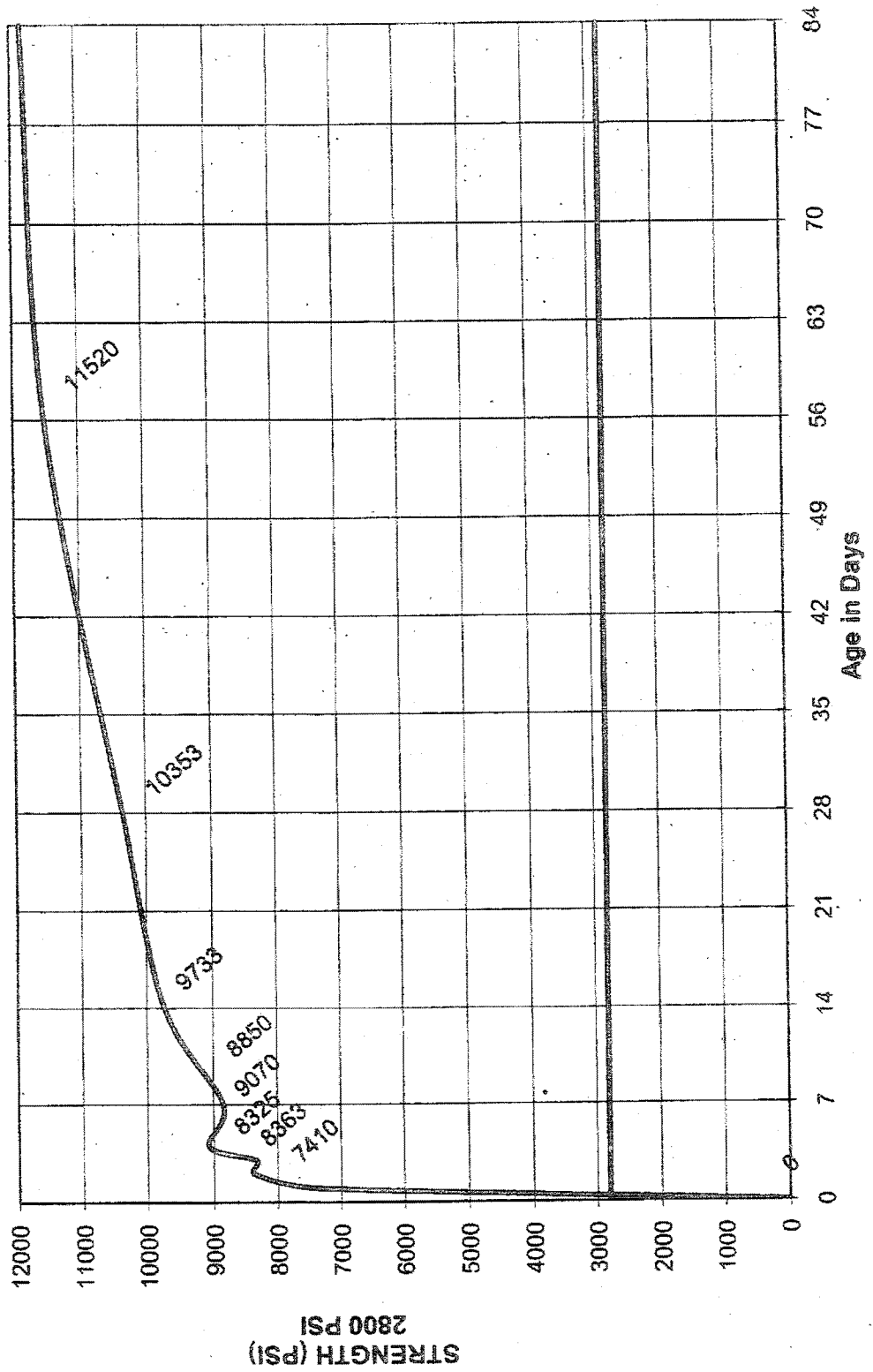
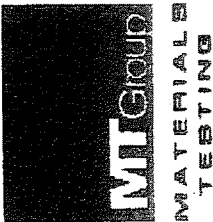
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DDC MIX DESIGNS
Strength Gain over Time
SUPER HE SUPERPAVE
Cementitious 940 Type II
MIX # 37

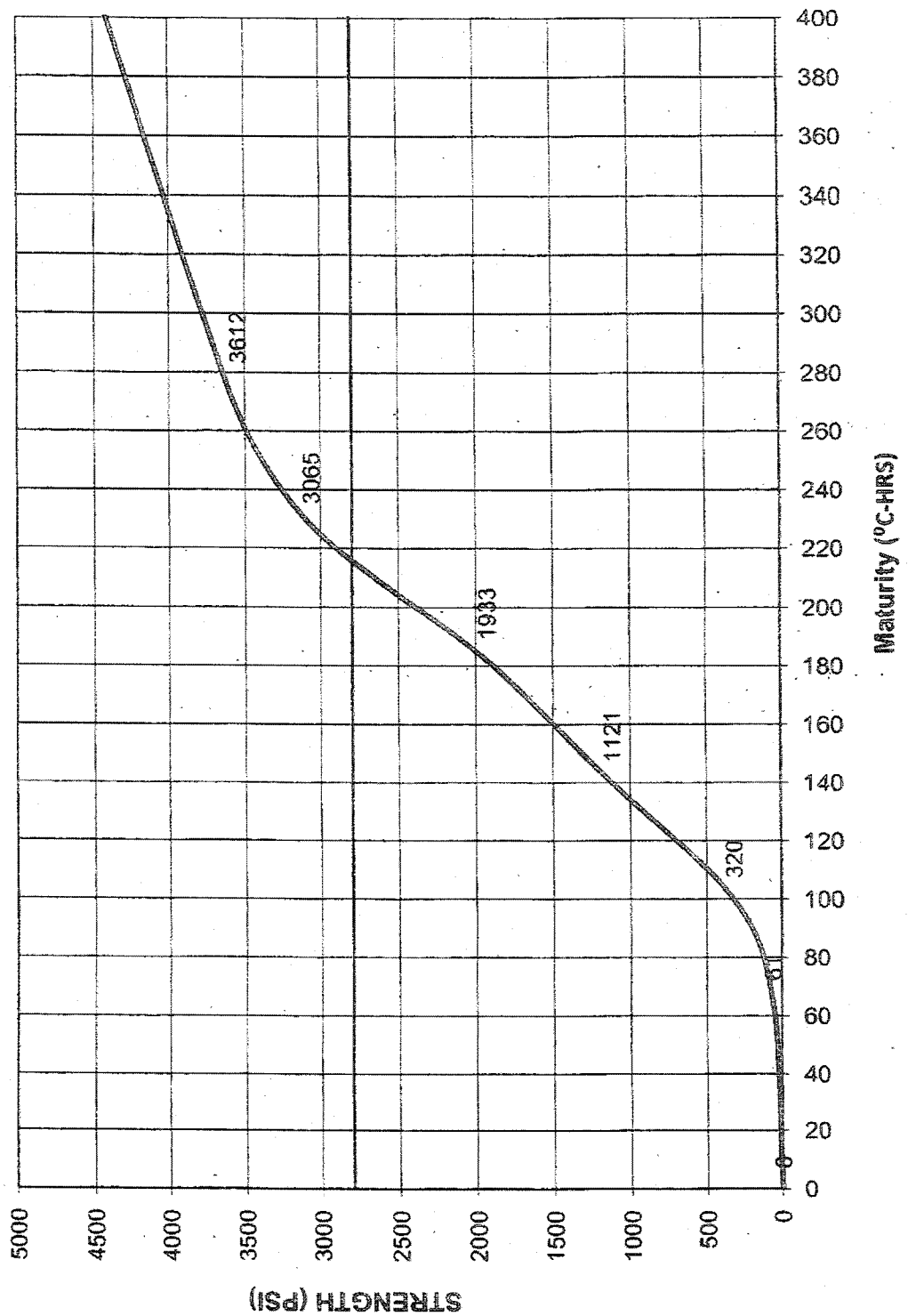
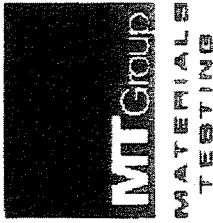


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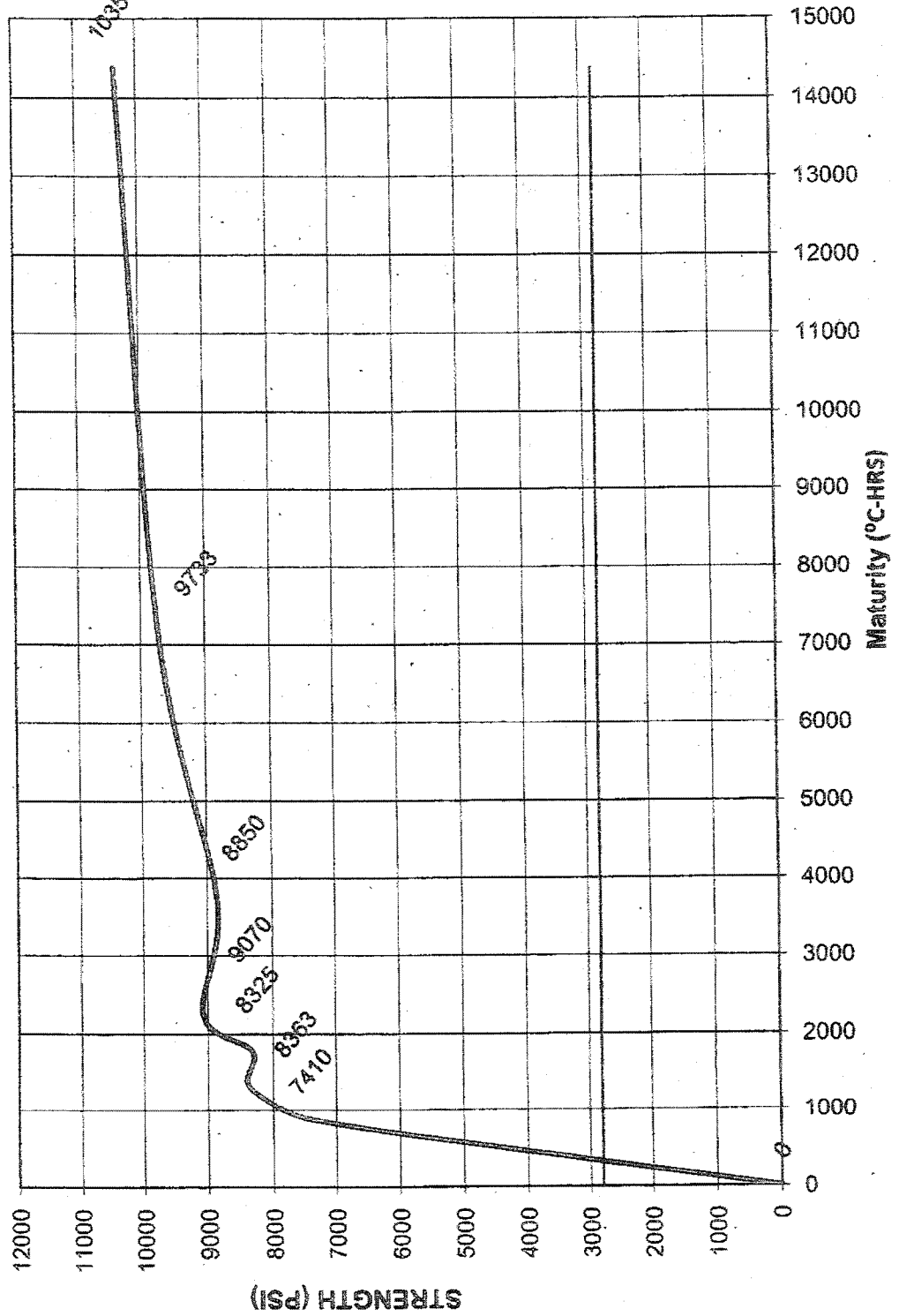
DDC MIX DESIGNS
Strength Gain over Time
SUPER HE SUPERPAVE
Cementitious 940 Type II
MIX # 37



DDC MIX DESIGNS
Strength Maturity Relationship
SUPER HE SUPERPAVE
Cementitious 940 Type II
MIX # 37



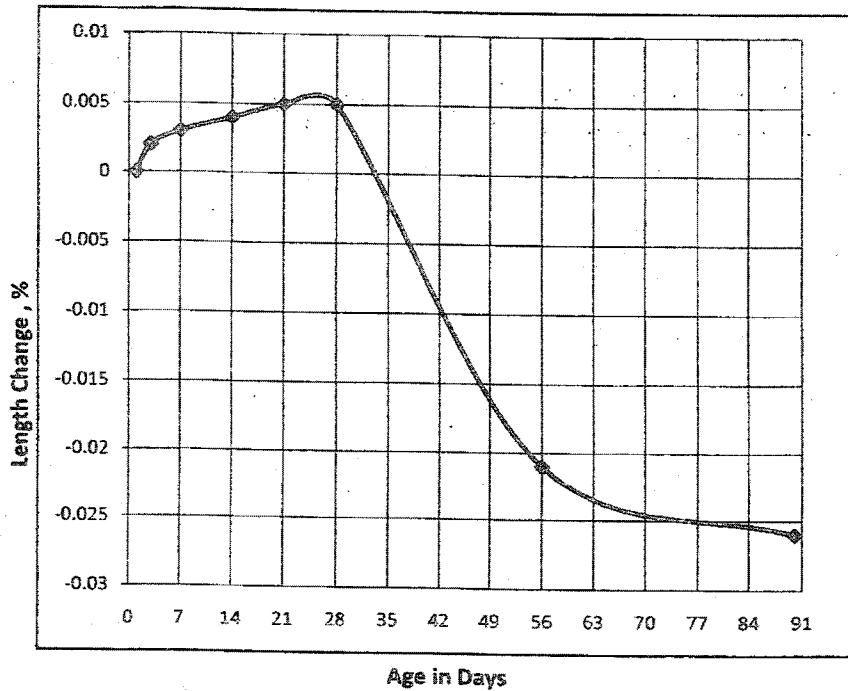
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Strength Maturity Relationship
SUPER HE SUPERPAVE
Cementitious 940 Type II
MIX # 37



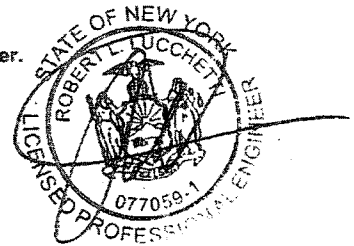


Client : NYC DDC
 Green Concrete Design Mixes
 Procedure: ASTM C 157-06
 4" x 4" x 10" Concrete Prism
 MIX # 37 - Super HE Superpave - Cementitious 940 Type II

Days	Length Change, %
1	0
3	0.002
7	0.003
14	0.004
21	0.005
28	0.005
56	-0.021
90	-0.026



Remarks: For the 28 day result, the sample was immersed in lime saturated water.
 For the 56 & 90 day results, the sample was air-dried.





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Client: NYC Dept. of Design & Construction Report #: 09DDC-767 Page 18 of 19
 30-30 Thomson Avenue Date: 05/06/09
 Long Island City, NY 11101 Lab#: 9273
 Project: DDC Green Concrete Design Mixes
 Test: Standard Test Method for Resistance of Concrete Cores to Freezing & Thawing.
 Method: NYSDOT Method 502-3P
 Sampled By: MTL

Test Procedure

The concrete samples were tested in accordance with NYSDOT Method 502-3P. The samples were completely surrounded in 3% NaCl solution at all times while being subjected to 25 freezing and thawing cycles.

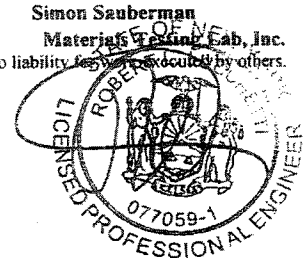
Required - Material shall not exhibit a weight loss greater than 3 %.

Test Results

Mix #	Cementitious lb/cy	% Fly Ash	Weight Loss %	Complies
37	940	-	0.0	Yes

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Reported To: Simon Sauberman
Submitted By: Materials Testing Lab, Inc.
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Client: NYC Dept. of Design & Construction **Report Date:** 11/07/08 **Page 1 of 2**
 30-30 Thomson Avenue **Material:** Natural Sand
 Long Island City, NY 11101 **Supplier:** CASA

Project: DDC Green Concrete Design Mixes
Test: Gradation, #200 Wash, Specific Gravity and Absorption of Fine Aggregate
Method: ASTM C117, ASTM C136, ASTM C128
Sampled By: MTL **On** 11/06/08 **Delivered By:** Materials Testing Lab

Gradation, #200 Wash

Sieve Size	% Passing #1	ASTM C33 Specification
3/8"	100.0	100
#4	99.6	95-100
#8	94.0	80-100
#16	83.1	50-85
#30	58.0	25-60
#50	19.0	10-30
#100	4.4	2-10

Specific Gravity and Absorption of Fine Aggregate

Specific Gravity (OD):	2.629
Specific Gravity (SSD):	2.653
Apparent Specific Gravity:	2.694
Absorption, %:	0.92

Location: Ronoke Sand - Washed

Complies: Y

Remarks:
 Lab # 9064

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Submitted By: Materials Testing Lab





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Client: NYC Dept. of Design & Construction **Report Date:** 11/07/08 **Page 2 of 2**
 30-30 Thomson Avenue **Material:** Crushed Stone
 Long Island City, NY 11101 **Supplier:** CASA

Project: DDC Green Concrete Design Mixes
Test: Gradation, #200 Wash, Specific Gravity and Absorption of Coarse Aggregate
Method: ASTM C117, ASTM C136, ASTM C127
Sampled By: MTL **On** 11/06/08 **Delivered By:** Materials Testing Lab

Gradation, #200 Wash

Sieve Size	% Passing #1	ASTM C33 Size #57 Specification
1 1/2"	100.0	100
1"	100.0	95-100
3/4"	91.6	-
1/2"	43.8	25-60
3/8"	20.0	-
#4	5.8	0-10
#8	3.7	0-5
#200	2.2	0-3

Specific Gravity and Absorption of Coarse Aggregate

Specific Gravity (OD):	2.807
Specific Gravity (SSD):	2.825
Apparent Specific Gravity:	2.857
Absorption, %:	0.62

Location: Tilcon Clinton Point

Complies: Y

Remarks:
 Lab # 9064

Reported To: --
Submitted By: Materials Testing Lab

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SECTION 7.01 P
Custom Subway Frames and Gratings

7.01P.1. INTENT. This section describes the furnishing and installation of custom sidewalk gratings and frames, where directed.

7.01P.2. DESCRIPTION. Under this section, the Contractor shall replace existing subway sidewalk frames and gratings where directed with custom-designed subway gratings and frames; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

7.01P.3. MATERIALS.

(A) **FRAMES AND GRATING.** Grates shall be of an ADA-compliant close-mesh, rectangular design, and shall comply with the following requirements:

1. Material to be steel.
2. Main bearing bars to be 2-1/4" x 3/16" spaced 11/16" center to center.
3. Cross bars to be 1" x 1/8" rectangular cross section flush top, and spaced 4" center to center.
4. Main bars and cross bars to be slotted at their intersections so as not to remove excessive material from the load sustaining members.
5. Main bars to be "dovetail" slotted and have their slots solidly filled by the cross bars.
6. Grating and Frames shall be hot dipped galvanized after fabrication.
7. Fixed grating panels shall be composed of 12" nominal width panels, modified with skew cuts where indicated on the drawings.
8. Removable grating panels shall be 12" nominal width wide and provided with N.Y.C. Transit Authority Standard locking device. Openings shall be as indicated on Contract Drawings.
9. Grating frame shall be of the size shown on the Contract Drawings and as required to hold gratings flush, with 1/2" diameter welded studs spaced at 3'-0" center-to-center maximum intervals with a minimum of two studs per side.
10. Overall dimensions, details, directions of bearing bars, and number of panels shall be in accordance with the Contract Drawings and the requirements of N.Y.C. Transit.

(B) **SUBMITTALS.** Follow the procedures in the General Conditions of **Sections 1.06.13** and **1.06.31** of the NYCDOT Standard Highway Specifications. The Contractor shall prepare shop drawings for the frame and gratings based on field measurements and the plans. Shop drawing plans shall be prepared at the scale of 1/2" = 1'-0" or larger.

7.01P.4. CONSTRUCTION METHODS.

- (A) GENERAL. All work shall be done in accordance with the requirements of the New York City Transit (NYCT) and the directions of the Engineer.

Existing subway construction designated to remain shall be maintained and protected. Damage caused by the Contractor's operations shall be repaired or replaced at the Contractor's own expense, to the satisfaction of the Engineer.

The Contractor shall provide shields in the vent opening to prevent debris from entering the subway. Shop drawings showing the type and construction of shields shall be submitted by the Contractor to the Engineer for approval prior to use.

All lumber and plywood used for protection of subway facilities at street level must be fire retardant; below street level, material used must be fireproof.

No building materials, vehicles or construction equipment are to be stored or run over vents, gratings or emergency exits.

Where sidewalk elevations are being changed details of proposed work around NYC Transit structures are to be submitted to the NYC Transit for approval.

When masonry is to be removed, penetrated, or drilled the work shall be done with hand labor entirely, using hammer and chisel. Jackhammers, bull points or other power equipment shall not be used.

Vibratory hammers will not be permitted within 75 feet of subway structures. Hoe rams will not be permitted within 25 feet of subway.

Before placing concrete, the subgrade of the foundations in the vicinity of the subway structure is to be inspected and approved by NYC Transit's Engineer.

Burning of, welding to or drilling through existing steel structures will not be permitted except as shown on drawings approved by NYCTA.

If new concrete construction is joined to existing concrete, dowels and keyways are to be used in accordance with NYC Transit Standards.

- (B) REMOVAL OF EXISTING GRATINGS AND FRAMES. The Contractor shall carefully remove existing subway sidewalk gratings and frames.

Frames and gratings designated to be replaced shall become the property of the Contractor and shall be removed and disposed of away from the site.

- (C) FURNISH NEW CUSTOM SUBWAY FRAMES AND GRATINGS. The Contractor shall be required to furnish and deliver new custom sidewalk subway grates and frames to the site for installation under this Item 7.01 P.
- (D) INSTALLATION OF NEW SIDEWALK SUBWAY FRAMES AND GRATINGS. The Contractor shall be required to build up and modify the existing subway ventilation walls such that the new frames and new gratings can be set at the new proposed elevations and horizontal alignment.

New frames and grates shall be set at their new elevation, flush with the adjoining pavement, and cast in concrete as indicated on the Contract Drawings or as directed by the Engineer. Accommodation shall be made for installation of asphalt block pavers as indicated on drawings.

Removable grating panels shall be installed in the locations shown on the Contract Drawings.

7.01P.5. MEASUREMENT. The quantities to be measured for payment under this item shall be the number of square feet of new custom subway gratings satisfactorily installed, measured within the frame perimeter.

7.01P.6. PRICE TO COVER. The unit price bid per square foot for Furnish and Install New Custom Subway Frames and Grates shall cover the cost of all labor, material, plant, equipment, insurance, and incidentals necessary to remove and dispose of existing sidewalk subway frames and gratings designated to be removed and replaced with new custom grates and frames; furnish new frames and gratings, complete with shop drawings; cut down and/or build up the existing subway ventilation walls as may be necessary and install new frames and gratings; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Concrete foundations and steel reinforcement will be paid for under other contract items, as appropriate.

Payment will be made under:

Item No.	Item	Pay Unit
7.01 P	FURNISH AND INSTALL NEW CUSTOM SUBWAY FRAMES AND GRATINGS	S.F.

SECTION 7.17
Open-Graded Stone Base

7.17.1. INTENT. This section describes the construction of an open-graded stone base.

7.17.2. DESCRIPTION. Open-graded stone base shall consist of the furnishing and placing of broken stone in the places designated on the Contract Drawings and in such other locations as field conditions require. The thicknesses and locations of the "open-graded stone base" shall be as shown on the Contract Drawings or as determined by field conditions and ordered by the Engineer.

7.17.3. MATERIALS.

(A) **STONE.** All materials for this work shall be of sound, clean, hard, durable freshly broken unweathered stone not contaminated with clay and free from any organic or other deleterious material. The material shall meet the following gradation requirements:

<u>Sieve Size</u>	<u>Percent Passing (By Weight)</u>
1 inch	100
3/4 inch	65-90
3/8 inch	45-75
No. 4	30-55
No. 100	4-15

The quality of the stone particles shall be determined by the Magnesium Sulphate Soundness Test. The maximum percent loss at 4 cycles, by weight, shall be 20.

Should, at any time during work and for any reason, the material fail to conform to the specified quality and gradation requirements, the Contractor shall, by the addition of selected acceptable material, and/or satisfactory manipulation, produce a material meeting the above requirements.

(B) **SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Prior to the placement of any base material, the Contractor shall submit a representative sample to the Engineer and obtain approval, in writing.

7.17.4. METHODS. The material shall be spread in equal thickness layers. The spreading of any layer of this material shall be done with spreader equipment approved by the Engineer, and shall be spread to such thickness that the maximum depth of the layer, after compaction, will be 6 inches. Spreading from piles dumped on the roadway will not be permitted. No segregation of large or fine particles will be allowed, but the material, as spread, shall be

well graded, with no pockets of fine material. Water shall be added in such amounts as the Engineer may consider necessary to obtain satisfactory compaction.

When the moisture content of the layer is within the limits for proper compaction, the entire surface shall be rolled with a pneumatic tired roller, having an operating weight of between 1,000 and 2,500 pounds per tire, or a smooth steel wheel roller, having a minimum weight of ten (10) tons. Each portion of the layer shall be covered by a minimum of eight (8) passes of the roller.

For heavier vibratory or more efficient types of approved compaction equipment, the minimum number of passes required on all portions of each layer shall be determined by the Engineer after appropriate field tests to evaluate the efficiency of such equipment. In limited areas, where the use of a roller is impractical, approved vibrating plate compactors or impact rammers shall be used to compact the material.

After compaction, the top surface of this base shall not extend above, nor more than 1/2 inch below, true grade and surface at any location. The base, at any location, shall be compacted, finished and completed to the above tolerance and approved by the Engineer, before any succeeding course is placed at that location. Any depressions or holes shall be filled with approved coarse sand or screenings and the surface re-rolled.

In all cases, this stone base must be so thoroughly compacted that it will not weave under the roller.

The width of the layer of this base shall be restricted to that required for placement of the lane being paved and shall not be laid in excess of 500 linear feet without being compacted. No traffic, or hauling other than that necessary for bringing material for the next course, shall be permitted over this base. Should the subgrade, subbase, or any other material become churned up into or mixed with this base, for any reason whatsoever, the Contractor shall remove such mixtures and replace with open-graded stone acceptable for this item at no additional cost to the City.

The Contractor shall assume full responsibility for any contamination and/or degradation of any part of this base during construction and shall remove any and all portions of this base which do not conform to the requirements of these specifications and replace these portions with specified material at no additional cost to the City.

7.17.5. MEASUREMENT. The quantity to be measured for payment shall be the number of cubic yards of compacted material placed in accordance with the Contract Drawings, the specifications and to the satisfaction of the Engineer.

7.17.6. **PRICE TO COVER.** The unit price bid per cubic yard for Open-Graded Stone Base shall cover the cost of all labor, materials, equipment, insurance, and necessary incidentals required to complete the work in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

No direct payment will be made for any losses of material which may result from shrinkage, compaction, waste, overflow, erosion, leakage, or any other causes; the cost of such losses shall be deemed included in the unit price bid for this item.

Payment will be made under:

Item No.	Item	Pay Unit
7.17	OPEN-GRADED STONE BASE	C.Y.

SECTION 7.48 U2
2" Diameter Unperforated PVC Pipe

7.48U2.1. DESCRIPTION. The work shall consist of furnishing and installing approved 2" diameter unperforated PVC Pipe drain at locations and in the manner shown on the Contract Drawings and as directed by the Engineer.

7.48U2.2. MATERIALS. Additional pipe shall be standard unperforated polyvinyl chloride plastic pipe 2" diameter conforming to NYSDOT Standard Specification **Section 706-15**, and shall be Schedule 80.

The manufacturer shall submit certified test data to cover each shipment of material.

7.48U2.3. CONSTRUCTION DETAILS. Underdrain shall be placed and graded as shown on the Contract Drawings.

Setting bed and tree installation, to be placed under other contract items, shall be done in a manner that will not prove injurious to the underdrain.

The overlaying material shall be placed within a period of two (2) weeks.

No traffic of Contractor's equipment will be permitted to travel directly on the underdrain.

7.48U2.4. METHOD OF MEASUREMENT. The quantity of 2" Diameter Unperforated PVC Pipe to be measured for payment shall be the number of linear feet (L.F.) of underdrain pipe actually installed to the satisfaction of the Engineer.

7.48U2.5. PRICE TO COVER. The unit price bid per linear foot of 2" Diameter Unperforated PVC Pipe shall include the cost of all materials, labor, equipment, insurance, and incidentals required to complete the work including, but not limited to, providing and installation of cleanouts and all fittings, and furnishing all excavation, backfilling, and compaction, necessary to install the underdrain components; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.48 U2	2" DIAMETER UNPERFORATED PVC PIPE	L.F.

SECTION 7.50 RB
River Bench

7.50RB.1. DESCRIPTION. Under this Section, the Contractor shall furnish and install the River Bench® with wood slats in accordance with the Contract Drawings, the specifications and directions of the Engineer.

7.50RB.2. MATERIALS. River Benches furnished by the following manufacturers are acceptable for use in this contract:

1. Grey to Green
68 Pine Street
Haworth, NJ 07641
Phone: (201) 403-6320
2. Soheil Mosun Limited
34 Greensboro Drive
Toronto, ON, Canada M9W 1E1
Phone: (416) 243-1600
3. FALCO US
2516 Bishop Rd.
Wickliffe, OH 44092
Phone: (212) 561-5130

4. or approved equivalent.

- (A) Standards: Bench standards shall be of cast ductile iron. The tensile strength shall meet a minimum of 65,000 psi, in accordance with ASTM designation A 536 for Grade 65-45-12. For River Bench there are three types of standard or gable: End Gable, Intermediate Gable with Armrest, and Intermediate Gable without Armrest.
- (B) Bench Back Slats and Frame: The support structure for the bench, with the exception of the stanchions, is constructed of 1" diameter hot rolled laser welded steel tubes and 1 - 1/2" x 1/4" slats are constructed of hot rolled steel bar stock. The slats and tubes shall be bent to the exact specifications/radius of a digital file using a computerized numerically controlled (CNC) brake press and bending machine.

Tubes shall be welded to the stanchions. After the tubes are located/affixed to the stanchions, the slats shall be inconspicuously welded to the stanchions/tubes in their designed locations.

Following assembly the entire structure shall be media blasted with garnet/silica median to remove tooling marks, weld slag and scale. Clean Steel members in accordance with SSPC-SP10 before zinc metalizing. Surface shall have a 3-4 mil anchor

pattern. Thermal spray must be applied within 4 hours of blasting.

- (C) Finishes for Cast Ductile Iron Standards: The Contractor shall supply metalized and powder coated bench standards.
- (D) Metalizing: The steel structure shall be galvanized prior to powder coating. Galvanizing shall be by the Zinc Metalizing Process. Zinc/aluminum metalizing (referred to herein as zinc metalizing) is the process of thermally applying an 85/15 zinc-aluminum wire over the surface of steel. Thermally spray material at a rate of 4-5 mils DFT (dry film thickness). Moisture cannot be present on steel and temperature cannot be less than 5°F above the dew point at the time of application. Sprayed coating shall be free of lumps, blisters, and loosely adhering particles.

Zinc metalizing and finish coating system shall have the following performance characteristics and results of tests performed on representative samples (hot dip galvanizing is not acceptable): Test zinc metalizing with complete finish coating (powder coating system) in accordance with ASTM D 4541. Pull-off strength throughout the system shall be not less than 750 psi before and after environmental cycling.

Environmental cycling shall be 10 cycles of the following: 4 hours at 100% humidity per ASTM D 1735; 16 hours below 0°F; and 4 hours at 140°F.

Corrosion resistance of zinc metalizing with powder coating shall receive a rating of 10 after 1000 hours salt fog (prohesion method) when tested in accordance with ASTM D 1654, Procedure A. Scribe shall be cut through all coatings to bare steel substrate. Expose specimens in accordance with ASTM G 85.

Galvanizing repair paint for re-galvanizing welds and damaged areas shall conform to ASTM A 780 and comply with Military Specification MIL-P-21035.

- (E) Powdercoating: All surfaces of the cast iron bench standards, bars and brace rods shall be powder coated with a polyester thermosetting powder coating such as manufactured by Tiger Drylac U.S.A., PPG Industries, Sherwin-Williams, or approved equivalent. Basis of design color shall be Dark Bronze Metallic, semi-gloss as manufactured by Tiger Drylac.

Powder coating shall be applied to the metal in such a manner that the coating will not peel off. Insure surfaces to be coated are clean and dry and free of grease, dust, rust, etc. All surfaces shall first receive phosphating and chromating treatments to improve the adhesion of the surface coating.

Powder coating shall be applied at a film thickness of 3 to 4 mils by electrostatic spray process and bake finished per the manufacturer's directions. It shall be applied without voids, tears or cuts that reveal the substrate and shall thoroughly adhere to the metal without peeling when scratched with a pick device or knife blade point. All visible nuts, washers, and ends of all bolts shall be painted with touch-up paint as described below.

- (F) Touch-up and Repair: For minor damage caused by installation or transportation, touch-up finish in conformance with manufacturer's recommendations. Provide touch-up such that repair is not visible from a distance of six (6') feet.
- (G) Laboratory Test For TGIC-Polyester Powdercoat: At the discretion of the Engineer, a sample TGIC-Polyester powder coated bench standard may be laboratory tested for bonding of the powder coating to the metal. Test shall be the Cross Hatch test per ASTM D3359, Method B. Failure to satisfactorily pass this test shall be a basis for rejection.
- (H) Bench Slats: Shall be American White Oak (*Quercus alba*) FAS grade or equivalent, untreated. National Hardwood Lumber Association (NHLA) grading rules shall apply.

Slats shall be milled perfectly smooth to the finished length. Each slat shall be of one continuous piece; no joints will be allowed. Lumber shall be parallel cut without heart center or sap-wood. All milled surfaces shall be sanded smooth on all four sides and both ends after being worked to the required dimensions. All edges shall be eased to a radius of one-eighth inch (1/8"). All wood shall be thoroughly seasoned and shall contain no more than twenty percent (20%) of moisture by weight.

Lumber shall be in sound condition, free from worm holes, longitudinal heart cracks, firm or soft sap wood, fungus, and deformation (twisting or cupping) which cannot be removed during installation using normal installation methods and tools. Natural drying checks, to a maximum of one-eighth inch (1/8") in width, will be acceptable. Sound knots are acceptable. All wood terminology referenced in this specification shall be as defined in ASTM D 9. A sound knot is defined as solid across its face, at least as hard as the surrounding wood, and showing no indication of decay. Any slat with unsound knots or any other limiting characteristics as described above shall be rejected and replaced. Dimensional tolerance (measured at 20% moisture content) shall be plus or minus 0.08" in both width and thickness.

Wood slats shall meet or exceed the mechanical properties as defined by U.S. Forest Product Laboratories testing methods (2" standard) as follows:

Bending strength:	2,400 psi
Modulus of elasticity:	1,700,000 psi
Modulus of rupture:	14,000 lbf/in ²
Hardness:	1200 lbf

- (I) Wood Finish: Wood slats shall not be painted or stained. Should any mold or mildew develop on the wood slats through the guarantee period, the Contractor shall wash the entire bench with a mild solution of bleach.
- (J) Hardware: All bolts, nuts, and washers used to secure slats to standards shall be stainless steel. Anchor bolts used to secure the benches to pavements shall be stainless steel. Type and dimensions of all bolts, nuts, and washers shall be as indicated on the plans. Threads of all bolts shall have the ends upset after installation of nuts so as to render the connection vandal resistant.

7.50RB.3. SUBMITTALS: Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.

- (A) Shop Drawings: The Contractor shall submit Shop Drawings. All submittal shall be as per NYC DOT Standard Highway Specifications, under Division 1 Contract Requirements, Section 1.06.13. Shop and Working Drawings.
- (B) Foundry Certificates: Certifying ductile iron used in bench standards shall be submitted.
- (C) Finishes: Submit test reports for zinc metalizing and powdercoating systems.
- (D) Samples: Submit two samples of Dark Bronze Metallic powder coat color and two samples each of 5 alternates of closest color similarity, for final selection.

7.50RB.4. METHOD. New bolts shall be lubricated by a product such as "Never-Seez" or "WD-40" compounds, or approved equal, before being used to secure new slats to the standards. Benches shall be pre-assembled before being installed in their final location in the work. After assembly, benches shall be installed in their final position and properly secured in place as indicated on the Contract Drawings. Bench slats shall not be painted or stained.

7.50RB.5. MEASUREMENT. The quantity of RIVER BENCH to be measured for payment under this item shall be the number of LINEAR FEET of bench satisfactorily installed, measured in place along the top slat.

7.50RB.6. PRICE TO COVER. The unit price bid per linear foot for River Bench shall cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to furnish and install River Benches complete with iron castings, slats, powder coating, and hardware; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.50 RB	RIVER BENCH	L.F.

**SECTION 7.53 KB
Table and Chair**

7.53KB.1. INTENT. This section describes the furnishing and installation of tables and chairs.

7.53KB.2. DESCRIPTION. Under this Section, the Contractor shall furnish and install tables & chairs, in accordance with the Contract Drawings, the specifications and directions of the Engineer.

7.53KB.3. MATERIALS. Materials shall comply with the following:

7.53KB.3.1. REFERENCES.

(A) ASTM Testing Standards:

1. ASTM B 108 - Standard Specification for Aluminum-Alloy Permanent Mold Castings.
2. ASTM B 117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
3. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
4. ASTM D 522 - Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
5. ASTM D 523 - Standard Test Method for Specular Gloss.
6. ASTM D 2247 - Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
7. ASTM D 2794 - Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
8. ASTM D 3359 - Standard Test Methods for Measuring Adhesion by Tape Test.
9. ASTM D 3363 - Standard Test Method for Film Hardness by Pencil Test.
10. ASTM G 155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

(B) ISO Testing Standards:

1. ISO 1520 - Paints and Varnishes - Cupping Test.
2. ISO 2815 - Paints and Varnishes - Buchholz Indentation Test.

(C) ANSI/BIFMA Testing Standards:

1. ANSI/BIFMA X5.4-2005 - Standard Test for Lounge Seating.

7.53KB.3.2. SUBMITTALS. Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.

(A) Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.

- (B) Samples: Submit three (3) samples of specified color as applied to an 8 inch by 8 inch square of specified metal for approval by Engineer.
- (C) Warranty: Guarantee for a minimum of three years.

7.53KB.3.3. QUALITY CONTROL.

- (A) Manufacturer's Qualifications: Manufacturer shall be regularly engaged in manufacture of site furnishings for a minimum of ten years.
- (B) Product Support: All Products shall be supported with complete engineering drawings and design patents.
- (C) Production: Orders shall be filled within 10 weeks.

7.53KB.3.4. DELIVERY, STORAGE, AND HANDLING.

- (A) Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- (B) Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- (C) Handling: Protect materials and finish during handling and installation to prevent damage.

7.53KB.3.5. WARRANTY.

- (A) Warranty Information:
 1. Products will be free from defects in material and/or workmanship for a period of three years from the date of substantial completion.
 2. The warranty may exclude damage resulting from accident, misuse, tampering, negligence, or abuse.
 3. Products shall be repaired or replaced to the satisfaction of the Engineer any items found defective upon inspection by an authorized manufacturer service representative and Engineer.

7.53KB.3.6. MANUFACTURER. Product to be as manufactured by:

- (A) Manufacturer: Landscape Forms, Inc., 431 Lawndale Avenue, Kalamazoo, Michigan 49048. Toll Free (800) 521-2546. Phone (269) 381-0396. Fax (269) 381-3455.
Website: www.landscapeforms.com
E-mail: denises@landscapeforms.com,
Studio431-Sales@landscapeforms.com.

(B) Table and Chair Distributors:

1. Arenson
Attn: Marianne Adinolfi
212-633-2400
MAdinolfi@aof.com
2. AFD
Attn: Ted Cohen
212-721-7100
tcohen@afd-inc.com
3. Empire
Attn: Lauren Woodie
212.607.5566
lwoodie@empireoffice.com
4. Or approved equivalent.

7.53KB.3.7. PRODUCTS.

(A) Table: 'Catena' Table with Freestanding Support

1. Table Type: Catena, 30 inch diameter, 29 inches height, no umbrella hole.
2. Table Tops: 16 gauge with rolled edge, reinforced with steel channels beneath the top.
3. Table Support: 2.5" outer diameter x 0.120" wall steel tubing welded to 18" diameter cast iron base.
 - a. Freestanding with nylon glides

(B) Chair: Parc Centre Chair

1. Chair Type: Parc Centre, 21 inch depth, 32-1/2 inch height, 18-1/2 inch width, 17-3/4 inch seat height.
2. Seat Back and Panels: 3/4" x 0.188" straps
3. Frame: 7/16" outer diameter steel cold-drawn steel wire.
4. Stacking Bumper Glide: nylon
5. Stackable.
6. Mounting: freestanding.

(C) Recycled Content:

1. Recycled Material Content: Minimum 90.6 percent.
2. Post-Consumer Material Content: Minimum 58.9 percent.
3. Pre-Consumer Material Content: Minimum 31.8 percent.
4. Recyclable: 100 percent.

7.53KB.3.8. FINISHES.**(A) Finish on Metal:**

1. Primer: Rust inhibitor.
2. Topcoat: Thermosetting TGIC polyester powder coat. UV, chip, and flake resistant.
 - a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
 - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
 - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
 - d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
 - e. Erichsen Cupping, ISO 1520: 8 mm.
 - f. Impression Hardness, Buchholz, ISO 2815: 95.
 - g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
 - h. Pencil Hardness, ASTM D 3363: 2H minimum.
 - i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
 - j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.
3. Tabletop Color: 'Metallic Bronze'.
4. Table Support Color: 'Metallic Bronze'.
5. Chair Color: 'Metallic Bronze'.

7.53KB.4. METHODS. The following methods of installation shall be used:

(A) Examination:

1. Examine areas to receive tables and chairs.
2. Notify the Engineer of conditions that would adversely affect installation or subsequent use.
3. Do not begin installation until unacceptable conditions are corrected and acceptance verified in writing by Engineer.

(B) Assembly:

1. Assemble tables and chairs in accordance with manufacturer's instructions.
2. Locate tables and chairs as directed by Engineer.

(C) Adjusting:

1. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Engineer.
2. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Engineer.

(D) Cleaning: Clean tables and chairs promptly after installation in accordance with manufacturer's instructions. Do not use harsh cleaning materials or methods that could damage finish.

(E) Protection: Protect installed tables and chairs to ensure tables and chairs will be without damage or deterioration at time of Substantial Completion.

7.53KB.5. MEASUREMENT.

(A) TABLE

The quantity of Tables to be measured for payment shall be the actual number of Tables installed at the site, to the satisfaction of the Engineer.

(B) CHAIR

The quantity of Chairs to be measured for payment shall be the actual number of Chair installed at the site, to the satisfaction of the Engineer.

7.53KB.6. PRICES TO COVER.

(A) TABLE

The unit price bid for EACH Table shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install tables including, but not limited to, hardware; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

(B) CHAIR

The unit price bid for EACH Chair shall include the cost of furnishing all labor, materials, equipment, insurance, and incidentals necessary to furnish, assemble and install chairs including, but not limited to, chair arm rests and glides, and hardware; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.53 KBT	TABLE	EACH
7.53 KBC	CHAIR	EACH

SECTION 7.54 A
Cast Iron Drain Frames and Grates

7.54A.1. DESCRIPTION. Under this section, the Contractor shall furnish and install cast iron drain frames and grates of the specified shape and size, in accordance with the Contract Drawings, the specifications and directions of the Engineer. The work of forming concrete and connecting and joining it to drainage piping and drainage structures, including connecting pieces, shall be included for each of the drain frames and grates specified.

7.54A.2. MATERIALS. The Drain Grates and Frames shall be Cast Grey Iron meeting the requirements of ASTM A 48 Class 35B with no finish.

(A) **MANUFACTURERS.** Cast Iron Frames and Grates are acceptable from the following manufacturers:

1. Campbell Foundry
800 Bergen Street, Harrison, New Jersey 07029
Tel. 973 483 5480; FAX 973 483 1843
2. Neenah Foundry
2121 Brooks Avenue, Neenah, WI 54956.
Tel. 920 725 7000; FAX 920 729 3661
3. General Foundries Inc.
1 Progress Road. North Brunswick, NJ 08902.
Tel. 732 951 9001; FAX 732 951 9002
4. Or approved equivalent supplier whose drain frame and grate castings comply with the material criteria outlined in **Subsection 7.54A.2**, herein.

(B) **GRATES AND FRAMES.** The drain frames and grates shall be fabricated with grates that are connected to frames with "lockable" screws or bolts.

For this contract, the products provided under the following contract item numbers shall be the models indicated or an approved equivalent in shape and size:

Item 7.54 ADD - Cast Iron DOME FRAME And Grate: Shall be Campbell Model 9604-0252, Drip Pan Inlets Domed Cover

Item 7.54 AFD - Cast Iron Floor Drain Frame And Grate: Shall be Campbell Model 9604-0012, Drip Pan Inlets Straight Inlet

(C) **SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Submit shop drawings for each drain frame and grate item in accordance with the requirements of the **General Conditions, Section 1.06.13** of the Standard Highway Specifications. Shop Drawings shall contain manufacturer's installation guidelines,

and include details of the connections to adjoin drainage piping and drainage structures.

7.54A.3. EXECUTION. Install drain frames and grates at the locations indicated on the Contract Drawings and in accordance with approved shop drawings. Finished drain frames and grates shall be constructed with a maximum allowable tolerance of $\pm 1/16$ " for dimensional accuracy and rail co-planarity.

7.54A.4. MEASUREMENT.

(A) CAST IRON DOME FRAME AND GRATE

The quantity to be measured for payment for Cast Iron Dome Frame And Grate shall be the number of complete dome frame and grate units of each actually installed and accepted.

(C) CAST IRON FLOOR DRAIN FRAME AND GRATE

The quantity to be measured for payment for Cast Iron Floor Drain Frame And Grate shall be the number of the floor drain frame and grate units actually installed and accepted.

7.54A.5. PRICES TO COVER. The unit prices bid for each item shall cover for furnishing all labor, materials (including forms, rails, anchorages, support bars and grates), tools, equipment, insurance and incidentals and for performing all the work involved in installing the drain frames and grates, complete in place, including excavation, concrete backfill and collars, reinforcement anchor and other connecting devices; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

(A) CAST IRON DOME FRAME AND GRATE

The contract price for each Cast Iron Dome Frame And Grate shall be the unit price bid for the complete installation of the frame and grate in accordance with Contract Drawings, the specifications and as directed by the Engineer.

Forming concrete for the drain installation and connections to drainage piping shall be included in the bid price for each drain frame and grate item.

(B) CAST IRON FLOOR DRAIN FRAME AND GRATE

The contract price for each Cast Iron Floor Drain Frame And Grate shall be the unit price bid for the complete installation of the frame and grate in accordance with Contract Drawings, the specifications and as directed by the Engineer.

Forming concrete for the drain installation and connections to drainage piping shall be included in the bid price for each respective drain frame and grate item.

Payment will be made under:

Item No.	Item	Pay Unit
7.54 ADD	CAST IRON DOME FRAME AND GRATE	EACH
7.54 AFD	CAST IRON FLOOR DRAIN FRAME AND GRATE	EACH

SECTION 7.54 B
Bronze Grates and Frames

7.54B.1. DESCRIPTION. This section describes fabrication and installation of Bronze Tree Grates and Frames, and Bronze Trench Drain Grates and Frames. Qualified fabricators and installers shall procure materials including but not limited to cast bronze gratings, fabricate all necessary components including frames and anchorage devices, install all frames, castings, and other fabricated components, and finish all exposed surfaces.

7.54B.2. MATERIALS.

(A) BRONZE.

1. Gratings and frames: Trench gratings and tree gratings shall be provided by the same manufacturer, and shall be of design with parallel grooves and openings for trench grates and concentric grooves and openings for tree grates. No other ornamentation will be acceptable. Frames shall be shop-fabricated from stainless steel, with a continuous skirt and slotted tabs for bolting into existing concrete footing. The edge of frame visible at finish grade shall be bronze. Approved manufacturers shall be Iron Age Designs, Burien, WA 98166 Phone: (877) 418-3568; or Urban Accessories, Tacoma, WA 98421, Phone: (877)487-0488; or Ironsmith, Inc., Palm Desert, CA, Phone: (800)338-4766, or approved equivalent manufacturer. Basis of design shall be "Metro" style trench and tree gratings as manufactured by Ironsmith Inc.
2. Cam Lock Opening Device: One panel at trench outlet to rain garden shall be provided with cam lock device to allow daily opening as necessary for clearing of accumulated debris. Provide two keys for opening to the Engineer.
3. Cast Bronze Elements: Tree grate and trench grate castings shall be C854 Copper Alloy (Yellow Brass) from 100% recycled materials.
4. Fabricated Bronze Elements: Bar and sheet stock shall be C385 Architectural Bronze.

(B) STAINLESS STEEL.

1. Fabricated Stainless Steel Elements: Shall be AISI Type 316.
2. Shallow condition continuous trench drain base: Shall be stainless steel and have a minimum length of four (4') feet.
3. Fastening devices: shall be stainless steel AISI Type 316.
4. Welded Wire Mesh reinforcement: shall be 1" x 1" grid, steel 1/16" diameter wire.

(C) CONCRETE.

1. Setting concrete for shallow installation: Shall be a packaged, two-component, shrinkage-free, self-curing, high-strength, cement-based topping screed mortar suitable for horizontal exterior applications, with the following characteristics:

- a. Compressive Strength ASTM C 109 - Greater than 6,000 psi
- b. Flexural Strength ASTM C 348 - Greater than 1,500 psi
- c. Slant / shear bond strength ASTM C 882 - Greater than 1,450 psi
- d. Volume change ASTM C 157 - +0.015%
- e. Freeze / thaw resistance ASTM C 666-A - 100%
- f. Resistance to de-icing salts ASTM C 672 - 0 rating, no scaling
- g. Permeability to chlorides ASTM C 1202 -100 to 1000 coulombs

(D) QUALITY CONTROL. Except as modified by governing codes and by this Specification, comply with the applicable provisions and recommendations of the AWS "Structural Welding Code" including all supplements, addenda and special rulings applicable to building construction. All welding in the shop or field shall be subject to controlled inspection NYC Building Code. Welding shall be performed by operators who have been qualified within the preceding one-year period under AWS standard qualification procedure for the type of work required.

Manufacturer of Trench Drain Gratings and Frames shall have a minimum of 5 years of experience in cast grate manufacturing incorporating bronze castings.

Installer of Trench Drain Gratings and Frames shall have a minimum of 2 years of experience installing tree and trench grates and support frames.

Structural Standards: Trench Gratings and Frames: Gratings and frames shall meet H-20 vehicular loading standards. Calculations signed and sealed by a NYS Licensed Professional Engineer shall be submitted.

Tolerances: Maximum variation from flush conditions for all elements shall be 1/16". Maximum variation in horizontal alignment of trench drains shall be 1/4" except where abutting stone curbwall, where joint width shall be maintained within 1/8" in either direction. Tolerances for fitting of gratings to frames shall be such that gratings fit without binding or gaps in excess of 1/8" on either side or total of 3/16" for both sides.

Warranty: Gratings and frames shall be warranted by the manufacturer against defects in materials and workmanship for a minimum of five (5) years.

- (E) **SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.

Qualifications: Submit statements of qualifications for all fabricators and installers including images and address locations of previous similar installations of bronze fabrications.

Shop Drawings: Submit shop drawings for each drain frame and grate item. Drawings shall be submitted at the scale of 1"-1'0" for plans and elevations, and 3"=1'0" or larger for detailed cross-sections. Shop drawings shall take into account field measurements for horizontal and vertical alignment. Shop drawings shall indicate typical weld types for each installation and connection condition. Coordinate shop drawings for variable-width trench drain with shop drawings for Bronze Veneer, Item 6.74 BV. Coordinate shop drawings for All shop drawings for items under this specification shall be coordinated and submitted concurrently.

Product Data: Submit product information for all cast and fabricated metals, welding materials, anchor devices, and setting materials. All product data shall be submitted concurrently with samples.

Samples: Submit samples of specified alloy for bronze bar stock for frames, 3 linear inches minimum, and minimum 4 square inches of specified alloy for grating castings. All samples shall be submitted concurrently.

- (F) **MOCK-UP.** Fabricate at the earliest possible time before proceeding with work and after approval of submitted samples and product data. The mock-up must be approved by engineer before the actual work may proceed. If necessary refabricate until approved. Provide and construct mock-up of Trench Drain Grates and Frames: minimum 2 linear feet of 12" wide casting, incorporating bronze/stainless steel frame and tamper-resistant fasteners. Clear digital photographs of mock-up shall be submitted for review prior to submission of physical sample. Digital photographs of mock-ups shall be submitted not less than one month prior to scheduled installation. Subject to approval by Engineer, casting may be used for finish installation.

7.54B.3. METHODS.

Workmanship shall be in accordance with AISC Specifications and as specified herein. Temporary bracing shall be provided wherever necessary during assembly and erection, and shall be left in place

as long as required. It is the Contractor's responsibility for safe practice in this regard. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Install bronze elements after danger of damage from construction traffic is past.

Do not begin installation until site is properly prepared. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

Frames for gratings shall be accurately formed to radii and linear alignment to allow for secure seating of grate units without binding or rocking. All grating castings shall be manufactured true to pattern and component parts, and shall fit together in a satisfactory manner. The castings shall be of uniform pattern and quality, free from blowholes, hard spots, shrinkage, distortion or other defects. Castings shall be cleaned by shot blasting. Grates shall be drilled and counterbored for Stainless Steel tamper resistant fasteners, supplied by trench/tree grate manufacturer. Grates are to be supplied in unfinished natural state. Walking surface of grates and frames to be finished in a 30-grit linear brushed finish for appearance and slip resistance. No coatings of any kind shall be applied.

Store products in manufacturer's packaging until ready to install.

Install steel angle frames for grates in accordance with details specified on Contract Drawings and manufacturer's recommendations. Install frames to allow for secure seating of grate units without binding or rocking. Maintain vertical alignment flush with surrounding pavers and granite band. If needed, grind pads on underside of trench grates to level and prevent grate rattle or rocking. Secure all gratings with specified fasteners. Restore finishes where damaged.

Frames shall be set and anchored securely in concrete per Contract Drawings.

Where indicated on Contract Drawings, frames shall be installed in shallow setting conditions using specified setting concrete for shallow installation, with wire mesh reinforcing. Materials, including continuous stainless steel trench drain base, and labor for shallow installation shall be included in the cost for frames and grates. Joints between the shallow condition stainless steel trench drain bases shall be flush and watertight. Transition from the shallow condition stainless steel trench drain base to the standard depth trench drain concrete base shall be flush and watertight.

7.54B.4 MEASUREMENT. The quantities to be measured for payment shall be:

(A) BRONZE TREE GRATE AND FRAME

The number of tree grates and frames provided and installed, including all anchoring and setting.

(B) BRONZE TRENCH DRAIN GRATES AND FRAMES, 8 INCH WIDTH

The number of lineal feet of trench drain furnished and installed, including all anchoring and setting, regardless of depth or bottom condition.

(C) BRONZE TRENCH DRAIN GRATES AND FRAMES, 12 INCH WIDTH

The number of lineal feet of trench drain furnished and installed, including all anchoring and setting.

(D) BRONZE TRENCH DRAIN GRATES AND FRAMES, VARIABLE WIDTH

The number of square feet of trench drain furnished and installed, measured in the horizontal dimension, measured from edge of castings.

7.54B.5. PRICES TO COVER:

(A) BRONZE TREE GRATE AND FRAME

The unit price bid per EACH Bronze Tree Grate And Frame shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and install bronze tree grate and frame including, but not limited to, anchoring the frame and fastening the grating to frame; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

(B) BRONZE TRENCH DRAIN GRATES AND FRAMES, 8 INCH WIDTH

The unit price bid per LINEAR FOOT for Bronze Trench Drain Grates and Frames, 8 Inch Width, shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and install bronze trench drain grates and frames including, but not limited to, continuous stainless steel bottom channel where required, anchoring the frame and fastening the grating to frame; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

(C) BRONZE TRENCH DRAIN GRATES AND FRAMES, 12 INCH WIDTH

The unit price bid per LINEAR FOOT for Bronze Trench Drain Grates and Frames, 12 Inch Width, shall cover the cost of all labor, materials, equipment, insurance and incidentals required to furnish and install bronze trench drain grates and frames including, but not limited to, anchoring the frame and fastening the grating to frame; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

(D) BRONZE TRENCH DRAIN GRATES AND FRAMES, VARIABLE WIDTH

The unit price bid per SQUARE FOOT for Bronze Trench Drain Grates and Frames, Variable Width, shall cover the cost of all labor, materials, equipment, insurance, and incidentals required to furnish and install bronze trench drain grates and frames including, but not limited to, fabrication of multiple custom grating shapes, stainless steel frame and supports spanning variable-width channel, anchoring the frame and fastening the grating to frame, and cam lock-removable grating unit; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
7.54 BTG	BRONZE TREE GRATE AND FRAME	EACH
7.54 BTD8	BRONZE TRENCH DRAIN GRATE AND FRAME, 8 INCH WIDTH	L.F.
7.54 BTD12	BRONZE TRENCH DRAIN GRATE AND FRAME, 12 INCH WIDTH	L.F.
7.54 BTDV	BRONZE TRENCH DRAIN GRATE AND FRAME, VARIABLE WIDTH	S.F.

SECTION 7.55 B
Bronze Railings

7.55B.1. DESCRIPTION. This section describes the fabrication and installation for Bronze Terrace Railings, Bronze Planter Railings, and Bronze Stair Railings. Qualified fabricators and installers shall procure materials, fabricate all necessary components, core-drill masonry to receive railings, set railings, and finish all exposed surfaces.

7.55B.2. MATERIALS.

- (A) Fabricated Bronze Elements: Tubing, rod, bar, and sheet stock shall be C385 Architectural Bronze.
Fabricated Stainless Steel Elements: Shall be AISI Type 304.
Fastening devices: shall be stainless steel, AISI Type 304.
- (B) Non-Shrink Grout: for anchoring handrail supports, shall be two-part epoxy grout, compatible with caulking.
Adhesive Sealant: for setting railing support base covers, shall be a flexible, clear-drying, two-part epoxy adhesive/sealant.
- (C) QUALITY CONTROL. Except as modified by governing codes and by this Specification, comply with the applicable provisions and recommendations of the AWS "Structural Welding Code" including all supplements, addenda and special rulings applicable to building construction. All welding in the shop or field shall be subject to controlled inspection NYC Building Code. Welding shall be performed by operators who have been qualified within the preceding one-year period under AWS standard qualification procedure for the type of work required.

Fabricator and installer shall demonstrate prior experience with fabrication of similar tubular bronze railings incorporating braze-welding of bronze components.

- (D) Structural Standards: Bronze Terrace Railing shall be designed to withstand positive and negative wind loads acting normal to planes of railing, including increased loads at end of railing, of 30 PSI; seismic loads and sway displacement as calculated in accordance with applicable code; top rail concentrated loads of 200 pounds applied at any point in any direction; top rail uniform load of 50 pounds per linear foot applied in any direction. Accommodate the following without damage to the system, components, deterioration of seals or failure of anchors or fastening devices: movement within system; movement between system and perimeter framing components; dynamic loading and release of loads; deflection of structural support framing; expansion and contraction from temperature range of 170 degrees F over 12-hour period. Calculations signed and

sealed by a NYS Licensed Professional Engineer shall be submitted.

- (E) Tolerances: Bronze Railings shall be fabricated to the following tolerances: within 1/8" from plumb in all directions for 36" vertical distance. Maximum variation from flush conditions for all elements shall be 1/16". Maximum variation in horizontal alignment from true dimensions for top rails shall be 1/4". Maximum variation from true vertical alignment of railings shall be 1/4".
- (F) SUBMITTALS. Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.
1. Qualifications: Submit statements of qualifications for all fabricators and installers including images and address locations of previous similar bronze railing fabrication and installation.
 2. Shop Drawings: Submit shop drawings for each railing item in accordance with the requirements of the **General Conditions, Section 1.06.13** of the Standard Highway Specifications. Shop drawing shall be submitted at the scale of 1" = 1'-0" for plans and elevations, and 3" = 1'-0" or larger for detailed cross-sections. Shop drawings shall take into account field measurements for horizontal and vertical alignment. Shop drawings shall indicate typical weld types for each connection condition. All shop drawings for items under this specification shall be coordinated and submitted concurrently.
 3. Product Data: Submit product information for all cast and fabricated metals, welding materials, anchor devices, and setting materials. All product data shall be submitted concurrently with samples.
 4. Samples: Submit samples of specified alloy for bronze tube and bar stock for railings, 3 linear inches each, and full range of standard colors for caulk. All samples shall be submitted concurrently.
- (G) Mock-ups: Fabricate at the earliest possible time before proceeding with work and after approval of submitted samples and product data. The mock-up/sample must be approved by the Engineer before the actual work may proceed. All mock-ups shall be submitted concurrently. If necessary refabricate until approved. Fabricate and provide mock-up of minimum 3 horizontal linear feet of Bronze Terrace Railing incorporating one support with base cover and one skateboard deterrent tab, all welded per Contract Drawings and specifications, with specified finish. Clear digital photographs of mock-up shall

be submitted for review prior to physical submission of mock-ups. Digital photographs of mock-up shall be submitted not less than one month prior to scheduled installation.

- (H) Field Mock-up: Sample installation of one railing support base cover in granite core-drilled hole, incorporating adhesive sealant per these specifications, shall be submitted for review prior to proceeding with the remainder of railing installation. Sample installation shall be at southernmost railing support. If approved, the installation shall be the standard for remainder of the work.

7.55B.3. METHODS. Workmanship shall be in accordance with AISC Specifications and as specified herein. Temporary bracing shall be provided wherever necessary during assembly and erection, and shall be left in place as long as required. It is the Contractor's responsibility for safe practice in this regard. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Install bronze elements after danger of damage from construction traffic is past. Do not begin installation until site is properly prepared. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

All elements shall be fabricated in strict accordance with the Contract Drawings and shop drawings. Curved elements shall be formed to accurate radii and alignment per layout plans, and shall incorporate slopes based on grading plans and verified by field measurements. All joints shall be completely welded with welds of proper size and shape, all welds ground smooth to a neat finish. Connection shall be provided as indicated on the Contract Drawings. Posts shall be set truly vertical; rails and bars shall be truly horizontal or parallel to grade as shown on the Contract Drawings, or as directed by the Engineer.

Skateboard Deterrent Tabs for railings shall be milled from solid rod stock in the shape and size required, and shall be continuously welded to railings, with welds ground smooth and clean.

Where welding of bronze is indicated in drawings or specifications, such welding, either bronze-to-bronze or bronze-to-stainless steel, shall be understood to be "braze-welding".

Railings shall be fabricated to allow accurate placement and proper alignment. Do not begin welding until joint elements are bolted or tacked in intimate contact and adjusted to dimensions with allowance for any weld shrinkage that is expected. All bronze-to-bronze and bronze-to-stainless steel welds shall be minimum 1/4" fillet weld brazing. Weld stainless steel-to-stainless steel sections with low hydrogen-type electrodes. No members are to be spliced without prior review by the Engineer. All welds on exposed surfaces shall

be ground smooth before finishing. If cracks of any size appear in installed items, the components shall either be repaired in the field or removed and refabricated as necessary to remediate cracking, at the discretion of the Engineer.

Exposed edges of rectangular-section bronze shall be eased to consistent 1/16" radius.

Store railings in fabricator's packaging until ready to install.

Holes to receive railings shall be cleanly core-drilled in granite and other masonry surfaces using the smallest size diameter to fit the support base covers, with not more than 1/8" additional diameter. Holes shall be accurately located per layout plans, and railing shop drawings shall be prepared to fit the hole locations as field-verified. The holes shall be of the depths indicated on the Contract Drawings, or eight inches, whichever is greater. Care shall be taken while drilling in granite such that no damage will be done. Any damage to masonry surfaces resulting from drilling operations shall be remediated by the Contractor at no additional cost to the City, which may include replacement of whole granite units. No repair of granite involving gluing or patching will be allowed.

The railings shall be erected as detailed on Contract Drawings, with base covers held on the supports above finish grade as necessary to allow grout filling. After posts have been set in place and properly supported to hold them to line and grade, the annular space shall be filled to the depth shown on the plans with non-shrinking grout. After the grout has hardened, the remaining space shall be filled with clear epoxy adhesive sealant, and support base cover shall be set precisely flush with finish grade and fully bedded in the material, with sealant fully filling the perimeter gap to within 1/16" of finish grade. In no case should sealant protrude above finish grade. Mask around drill holes as necessary to prevent sealant from contacting or staining adjacent surfaces.

Any handrails and gates not set plumb and true to line and grade shall be removed and replaced by the Contractor at no additional cost to the City.

All exposed railing surfaces shall be finished with a non-directional satin finish. No coatings or patina of any kind shall be applied. Where abraded or scuffed, the finish shall be fully restored to the satisfaction of the Engineer at time of Substantial Completion.

7.55B.4. MEASUREMENT. The quantities to be measured for payment shall be:

(A) BRONZE TERRACE RAILING. The quantity to be measured for payment shall be the number of linear feet of Bronze Terrace

Railing actually installed, to the satisfaction of the Engineer.

- (B) BRONZE PLANTER RAILING. The quantity to be measured for payment shall be the number of linear feet of Bronze Planter Railing actually installed, to the satisfaction of the Engineer.
- (C) BRONZE STAIR RAILING. The quantity to be measured for payment shall be the number of linear feet of Bronze Stair Railing actually installed, to the satisfaction of the Engineer.

7.55B.5. PRICES TO COVER.

- (A) BRONZE TERRACE RAILING. The unit price bid per linear foot for Bronze Terrace Railing shall cover the cost of all labor, materials, fabrication, equipment, insurance, and incidentals required and completing the work, including, but not limited to, core-drilling, setting, and finishing; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.
- (B) BRONZE PLANTER RAILING. The unit price bid per linear foot for Bronze Planter Railing shall cover the cost of all labor, materials, fabrication, equipment, insurance, and incidentals required and completing the work, including, but not limited to, core-drilling, setting, and finishing; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.
- (C) BRONZE STAIR RAILING. The unit price bid per linear foot for Bronze Stair Railing shall cover the cost of all labor, materials, fabrication, equipment, insurance, and incidentals required and completing the work, including, but not limited to, core-drilling, setting, and finishing; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under in:

Item No.	Item	Pay Unit
7.55 BTR	BRONZE TERRACE RAILING	L.F.
7.55 BPR	BRONZE PLANTER RAILING	L.F.
7.55 BSR	BRONZE STAIR RAILING	L.F.

SECTION 8.15 RDF
River Drinking Fountain

8.15RDF.1. DESCRIPTION. Under this item, the Contractor shall furnish all labor, materials and equipment necessary or required to furnish and install aluminum accessible RIVER DRINKING FOUNTAIN in compliance with all A.D.A. and A.N.S.I. standards, including all internal plumbing, precast concrete foundation, crushed stone base, miscellaneous iron and steel, all external plumbing work, and connection to water service and drain within five (5) feet of the edge of the foundation walls, all in accordance with the Contract Drawings, specifications, and directions of the Engineer. Drinking Fountain design and installation shall comply with Americans with Disabilities Act (ADA) provisions as described in ANSI A117.1

8.15RDF.2. MATERIALS.

(A) **Drinking Fountain.** The Drinking Fountain shall be delivered as a preassembled cast aluminum body, with custom integrated bubbler, push buttons, bottle filler and all internal plumbing, as manufactured by X2 US, Powhatan, VA, or approved equivalent, as per the drawings and specifications. The drinking fountain plumbing shall be designed for winter shutoff, without non-freeze valve assembly.

River Drinking Fountain items furnished by the following suppliers:

1. X 2 US, LLC
1560 Standing Ridge Drive
Powhatan, VA 23139
Phone: (804) 378-5020
2. Grey to Green
68 Pine Street
Haworth, NJ 07641
Phone: (201) 403-6320.
3. Soheil Mosun Limited
34 Greensboro Drive
Toronto, ON, Canada M9W 1E1
Phone: (416) 243-1600
4. Falco US
2516 Bishop Rd.
Wickliffe, OH 44092
Phone: (212) 561-5130
5. or approved equivalent.

Opening: A custom opening shall be provided above the fountain anchor plate to allow water supply carrier pipe to enter the drinking fountain body, as shown on the drawings. The opening shall be provided at a height such that the carrier pipe shall

be below, and not come into contact with, with the bituminous setting bed for surface asphalt pavers.

Finishes for Cast Aluminum Drinking Fountain: The finish of the cast aluminum drinking fountain shall be powder coated, as per the specifications.

Powdercoating: All surfaces of the cast aluminum drinking fountain shall be powder coated with a polyester thermosetting powder coating such as manufactured by Tiger Drylac, PPG Industries, Sherwin-Williams, or approved equivalent. Color shall be selected from a range of 6 alternatives colors closest to and including Medium Metallic Bronze, semi-gloss, or approved equal.

Powdercoating shall be applied to the metal in such a manner that the coating will not peel off. Insure surfaces to be coated are clean and dry and free of grease, dust, rust, etc. All surfaces shall first receive phosphating and chromating treatments to improve the adhesion of the surface coating.

Powdercoating shall be applied at a film thickness of 3 to 4 mils by electrostatic spray process and bake finished per the manufacturer's directions. It shall be applied without voids, tears or cuts that reveal the substrate and shall thoroughly adhere to the metal without peeling when scratched with a pick device or knife blade point. All visible nuts, washers, and ends of all bolts shall be painted with touch-up paint as described below.

Touch-up and Repair: For minor damage caused by installation or transportation, touch-up finish in conformance with manufacturer's recommendations. Provide touch-up such that repair is not visible from a distance of two (2) feet.

Laboratory Test For TGIC-Polyester Powdercoat: At the discretion of the Engineer, a sample TGIC-Polyester powder coated bench standard may be laboratory tested for bonding of the powder coating to the metal. Test shall be the Cross Hatch test per ASTM D 3359, method B. Failure to satisfactorily pass this test shall be a basis for rejection.

Hardware: All hardware shall be 18-8 stainless steel type 304 in accordance with ASTM F 593. All heads shall be vandal resistant.

Plumbing: Bubblers, push buttons, bottle fillers and all internal plumbing shall be preassembled by the drinking fountain manufacturer and shall meet the requirements of the plumbing section of this specification and the Contract Drawings. The drinking fountain manufacturer shall have all factory installed plumbing components pre-tested installed

before delivery to site. All factory connections shall be made by a Licensed Plumber.

The drinking fountain is to be handled at lifting locations designated by the manufacturer; no chipped, cracked, or otherwise defective fountains will be acceptable. All parts and installation shall meet applicable requirements of N.Y.C. Codes.

(B) Plumbing.

Water Piping: All water lines up to the water supply system inside the building, the connection shall be of rigid hard temper type "k" copper tubing 1" in diameter, meeting the specification for A.S.T.M. Designation B88. Fittings shall be approved wrought copper and bronze solder joint pressure fittings (A.N.S.I. B 16.22).

Valve: For Winter shut-off. Provide a 1" shut off valve inside the Grand Central Viaduct restaurant concession, in the kitchen room on the outside wall at a convenient location with all appropriate appurtenances.

Bubbler Control: Valve shall be brass with a polished chrome-plated push button. All exposed parts to have a polished chrome-plated finish. Bubbler controls shall be a polished chrome-plated brass push button activated by a maximum of five (5) pounds of pressure.

Bubbler Assembly: Bubbler assembly shall be one piece brass including the tail piece. Provide a vandal-resistant lock washer. All exposed parts to be brass with a polished chrome-plated finish.

Push Button: Push button shall be brass with a polished chrome-plated finish.

Bottle Filler: Bottle filler shall be brass with a polished chrome-plated finish.

Drainage: Drinking fountain shall drain into formed concrete basin with drain casting, as indicated on the Contract Drawings.

Drain Casting: Shall be 352-90 drain with 3" side outlet, as manufactured by Zurn Products, Burnsville, MN 55337, 800-518-5388, or equivalent product model manufactured by J.R. Smith Manufacturing Company, Montgomery, AL 36109, (800) 467-6484, or Josam Company, Michigan City, IN 46360 (800) 365-6726 or approved equivalent.

Grout for Drainage Basin: Shall be a packaged, two-component, shrinkage-free, self-curing, high-strength, cement-based topping mortar with the following characteristics:

- Compressive Strength ASTM C109 - Greater than 6,000 psi
- Flexural Strength ASTM C348 - Greater than 1,500 psi
- Slant/shear bond strength ASTM C882 - Greater than 1,450 psi
- Volume change ASTM C 157 - +0.015%
- Freeze / thaw resistance ASTM C 666-A - 100%
- Resistance to de-icing salts ASTM C672 - 0 rating, no scaling
- Permeability to chlorides ASTM C1202 -100 to 1000 coulombs

Basin Pan: Shall be formed from Stainless Steel Type 304, and welded to steel base sheet foundation.

Outlet Pipe and Couplings: The outlet pipe shall be 3" PVC pipe schedule 80 connected with 3" drain casting outlet and perforated pipe with schedule 80 couplings.

Perforated Drain Pipe: Shall be 3" diameter perforated (N-12) pipe shall have a full circular cross-section, with an outer corrugated perforated pipe wall and an essentially smooth inner wall (waterway). Corrugations for these sizes may be either annular or spiral. Size shall conform to the AASHTO classification "Type SP" (which describes pipe with a smooth waterway and Class 2 perforations). Pipe manufactured for this specification shall comply with the requirements for test methods, dimensions, and markings found in AASHTO Designations M252 and M294. Pipe and fittings shall be made from virgin polyethylene compounds which conform with the requirements of cell Class 324420C, as defined and described in ASTM D3350. Compatible fittings shall be provided as required to achieve drainage layout. The fittings shall not reduce or impair the overall integrity or function of the pipe line. Fittings may be either molded or fabricated. Common corrugated fittings include in-line joint fittings, such as couplers and reducers, and branch or complimentary assembly fittings such as tees, wyes, and end caps. These fittings may be installed by various methods, such as snap-on, screw on, bell and spigot, and wrap around. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints. Only fittings supplied or recommended by the pipe manufacturer shall be used. Where designated on the plans, a neoprene or rubber gasket shall be supplied.

Pipe Supports: Pipe clamps shall be made up of 1" x 3/8" galvanized strap iron and shall be rigidly constructed to hold the pipe firmly in place. Clamps shall be held in place with anchor bolts drilled into the fountain shaft or base.

Factory Installation: All pipes except the bubbler tailpiece passing through walls shall be run through pipe sleeves. The

stainless steel push button rod shall be protected with sleeves where it passes through walls.

- (C) **Foundation.** The drinking fountain shall be installed on steel base sheet foundation, as indicated in the drawings. Sheet, studs, and attachment shall be hot dipped galvanized steel after fabrication.

8.15RDF.3. SUBMITTALS. Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.

- (A) **Catalogue Cuts:** The Contractor shall submit Catalogue Cuts of the hardware, brass bubblers, push buttons, and all other plumbing parts for approval twelve (12) weeks prior to proposed installation.
- (B) **Shop Drawings:** Follow the requirements of the **Section 1.06.13** of NYCDOT Standard Highway Specifications for submission of the shop and working drawings. The Contractor shall submit complete dimensional shop drawings, for approval, twelve (12) weeks prior to proposed installation, showing details of construction, reinforcement, plumbing, etc., including gauges of metal and thickness of wall construction.
- (C) **Foundry Certificates:** A foundry certificate verifying authenticity of aluminum supplied on this item shall be submitted. The certificate shall be on foundry letterhead, dated and signed by an officer of the company with the contract name and number, Contractor name, and class of aluminum provided.
- (D) **Paint Finishes:** The Contractor shall submit 3" x 6" samples of specified paint finish, and 5 other closest metallic colors darker and lighter than the specified color.

8.15RDF.4. METHODS.

The steel base sheet foundation shall be set on protected surface of existing vault, with end anchored within poured concrete at step in vault roof. Drinking fountain base shall be bolted level on stainless steel studs welded to steel base sheet foundation. The drinking fountain is to be handled at lifting locations designated by the manufacturer; no clipped, cracked, or otherwise defective fountains will be acceptable. All field connections to be made by a licensed plumber. The factory installed portion of the cold water supply shall be extended from the drinking fountain base at lengths indicated on the Contract Drawings.

Field Connections required to complete the installation include a 1" ground hydrant installation as shown on drawing number UD-02 complete with the "Zurn" Z-1360-HD-RK-10 Ground Hydrant and a valve

box setting 5-1/4" Nominal Diameter as shown on the same drawing. All parts required shall be supplied and installed in accordance with specifications Sections PK-184-GH1 and PK-17. Contractor shall construct a proposed pipe drainage connection to a broken stone drywell as shown on the plan UTL-01 and detailed on drawing UD-02 in accordance with the specification PK-17. Drinking fountain shall be winterized by shutting off the water supply inside the building and opening the valve installed on the drainage connection as shown on the drawing to allow the internal water to drain by gravity into the constructed 2' x 2' x 2' pocket of broken stone.

Water lines shall be pitched away from the Drinking Fountain and to the proposed broken stone drywell. Pockets in rigid piping that cannot be drained by gravity will be rejected. The plumber will be required to reinstall piping until gravity drain is achieved.

8.15RDF.5. MEASUREMENT. The quantity measured for payment shall be the number of River Drinking Fountain actually installed, to the satisfaction of the Engineer.

8.15RDF.6. PRICE TO COVER. The unit price bid for each furnished and installed River Drinking Fountain shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work, including, but not limited to, excavation, furnishing and installing crushed stone, steel plate fountain, miscellaneous iron and steel, locking bolts, and all plumbing work and connections to water and drain services, including perforated drain pipe, within ten (10) feet from the edges of the foundation; all in accordance with the Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
8.15 RDF	RIVER DRINKING FOUNTAIN	EACH

SECTION 9.06 HW**Allowance For Decorative Mesh Fabric**

9.06HW.1. DESCRIPTION. Under this Section, the Contractor will be paid to furnish and install panels of breathable mesh fabric upon which art work is printed in a maximum of 4-colors, as directed by the Engineer. Each panel shall also contain metal grommets installed at a 1' maximum spacing around the perimeter of the fabric for mounting on the Temporary Chain link Fence as specified in the drawings, unless an alternate method of mounting the fabric is proposed by the Contractor and approved by the Engineer. All art work to be printed on the fabric will be provided to the Contractor by the City.

At the completion of the work the panels shall remain the property of the City and shall be delivered to the Engineer, unless otherwise directed.

The lump sum payment made under this item shall be equal to the sum total of all invoices submitted by the Contractor, as approved by the Engineer, for furnishing and installing decorative mesh fabric materials, to the satisfaction of the Engineer, plus an allowance of 10% overhead and 10% profit.

The total estimated cost of this item is the "fixed sum" amount shown for this item in the Bid Schedule and shall not be varied in the bid. No guarantee is given that the actual lump sum cost for this item will in fact be the "fixed sum" amount. The "fixed sum" amount is included in the bid solely to ensure that sufficient monies will be available to pay the Contractor for this work, which may be more or less than the fixed amount. This "fixed sum" amount shall be included with the other amounts bid by the Contractor for all the other items under this contract.

The unit price shall cover the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work under this section in accordance with the Contract Drawings, the specifications and the directions of the Engineer

Payment will be made under:

Item No.	Item	Pay Unit
9.06 HW	ALLOWANCE FOR DECORATIVE MESH FABRIC	F.S.

SECTION 9.95 G
Dimensioned Granite Masonry

9.95G.1. DESCRIPTION. This section describes the furnishing and installation of all dimensioned granite masonry indicated, including Granite Paving Bands, Granite Curb Walls and Granite Stair Treads in accordance with Contract Drawings, the specifications and the directions of the Engineer. This section does not pertain to granite street curbs, which are specified in **Section 4.07** of the NYCDOT Standard Highway Specifications.

9.95G.2. MATERIALS

(A) Stone Materials

All stone shall be carefully selected, from sound stock, and free from defects impairing strength, durability or appearance, such as cracks, seams, starts, holes, flaws, or imperfections, which have been patched or filled. All stone shall be uniformly consistent in color, value, graining texture, and other features to the extent inherent in the specified stone type. Color and value variations shall be within ranges established by approved samples.

Graining and texture variations, whether highly figured or uniform, shall be consistent in all material supplied. Material sources and quarry locations shall be approved by Engineer for each stone type.

All granite shall be "Jet Mist" granite, a fine-grained granite, dark grey in color, with light-grey veins and swirls, of compressive strength greater than 33,000 psi (MPa) per ASTM C 170, as supplied by the following:

- (1) Furlong & Lee Stone Sales, Inc., 51 East 42nd Street, Suite 1409, New York, NY 10017, (212) 986-3828.
- (2) The North Carolina Granite Corporation, Mt. Airy, North Carolina, (336) 786-5141,.
- (3) Hobart Stone Dealers, 761 Conklin Rd Binghamton, NY 13903 Tel: (607) 723-0834.
- (4) or approved equivalent

Stone from other suppliers may be deemed acceptable as "equivalent" based on criteria including individual specimen color and texture, material properties, contrast and compatibility of texture and color with other material specified. The Engineer shall be the sole arbiter of such compatibility.

Typical joint width shall be 1/4" unless otherwise specified in the Contract Drawings.

Source Quality Control of Stone Material: Furnish testing of each granite stone type and finish for this Project, prepared by an approved independent and qualified testing agency. Tests shall be performed at thickness of 1.5" and with selected finished stone top surface. Granite materials shall conform to ASTM C 615, Granite Building Stone. Test reports for stone materials shall show and list minimum values for the following physical characteristics as a minimum: Modules of rupture, ASTM C 99; Compressive strengths, ASTM C 170; Absorption, ASTM C 97; Flexural Strength, C 880. Provide mineral and chemical compositions of stone and identification of any material composition that may cause staining within stone or on surface of stone such as iron pyrites or other detrimental material.

(B) Stone Fabrication

Stone shall be cut to sizes, shapes, dimensions, and details shown for each type and condition. Relate to and adjust stone fabrication together with installation requirements specified, herein. Include all cutting, drilling, and fitting of stone required to accommodate the work of other trades.

Where shapes are indicated on Contract Drawings as curved, either graphically or in text, edges shall be cut to true radii. Where elements curve horizontally and slope vertically, curvature shall be accurate in the horizontal plane.

Exposed surfaces and edges of stone units shall be free from cracks, broken corners, chipped edges, scratches, or other defects affecting appearance. No patching, joining, or hiding of defects will be permitted.

Provide stone of the thickness specified or otherwise shown as a minimum. Maximum variations in thickness from that shown shall not exceed 1/8" on units 4" or less.

Cut stone full and true on faces, reveals, beds, joints, and top to the full dimensions required by Contract Drawings. All sawn edges shall be straight and true. Maximum deviation from straight line or radii indicated shall not exceed 1/16" when measured with a 10' straightedge or radial template, or plus or minus one-fourth the width of joints, whichever is more stringent. All units shall fit together accurately. Reference Erection Tolerances herein for additional criteria.

Fabricate stone so that joints between units shall be as shown on Contract Drawings typically for alignment and spacing. Make faces of stone in same plane flush at joints. All finished surfaces of stone panel and coping units shall be true and out of wind.

Shop Cutting, Drilling, and Fitting: Include all cutting, drilling, and fitting of stone required to accommodate the work of other trades. In cutting and fitting, carefully cut and grind edges to a neat, tight, fit. Cutting shall be in such a manner so as not to impair strength or appearance. Use physical templates (not just drawing dimensions) for all cutting and drilling. Obtain required templates from appropriate trades and suppliers.

Exposed Faces and Edges: Provide finish characteristics and quality indicated for each stone material type, condition of use, and as approved. Exposed stone surfaces shall be "Thermal" finish as defined by NGBQA and shall be mechanically applied by flame in the long dimension of finished work. The application of finish shall be controlled to avoid any visible directionality.

(C) Installation Materials

Furnish all anchors, cramps, dowels, tiebacks, and the like fitting hardware as necessary to properly secure stone units. Types to be approved, of sizes and shapes to fit each particular support condition encountered. Metal components for exterior work shall be stainless steel, Type 302/304, nonmagnetic.

Lead or plastic buttons used shall be of the thickness required for the joint size shown or specified, and of the size required to maintain a uniform joint width, and meet the load requirements of stone installation condition.

Epoxy adhesive for joining granite paving band to street curb shall be a two-part epoxy adhesive suitable for excellent performance in exterior applications requiring strong bond. Cured color shall be dark grey matching adjacent granite.

Non-shrink epoxy grout for setting stainless steel dowels, handrails, etc., shall be of a type specifically intended for excellent performance in grouting metal into masonry.

Grout for mortar joints shall be colored, packaged epoxy grout as Laticrete Spectralock Pro Premium Grout, or equivalent type by Sika or Sonneborn, or approved equivalent. Color shall be as selected from a full range of manufacturer's colors by the Engineer.

Mortar Setting Beds shall be Laticrete 3701 Fortified Mortar Bed, or approved equivalent by Sika or Sonneborn, or approved equivalent.

Setting Adhesives and Slurry Bond Coat shall be Laticrete 254 Platinum, or approved equivalent adhesive type by Sika,

Sonneborn, or approved equivalent.

Caulk/Expansion Joint Materials:

- (1) Joint filler material shall be an approved premolded non-bituminous material, compatible with backer rod and sealant.
- (2) Backer rod shall be closed cell polyethylene backer rod.
- (3) Sealant at horizontal surfaces shall be "Sonolastic NP II" two-part elastomeric polyurethane, or approved equivalent type by Sika or Pecora, or approved equivalent. Color shall be as selected from a full range of manufacturer's colors by the Engineer.

9.95G.3. QUALITY CONTROL.

- (A) References Standards (as applicable generically to stone type(s) or material specified: National Building Granite Quarries Association (NBGQA); American Society for Testing and Materials (ASTM); American National Standards Institute (ANSI); American Iron and Steel Institute (AISI). In case of conflict between the referenced standards, codes, or Contract Documents, the referenced standard, code, or Contract Document having the more stringent shall govern as approved by Engineer.
- (B) Fabrication Qualifications: Stone fabrications shall be by a firm or firms that have successfully fabricated stonework similar to the quality and in the quality shown of each material type and condition, specified, and in the quality specified, for a period of not less than 5 years. Special attention is drawn to the radially-curved and sloped granite curbwall and special cutting necessary to receive nesting granite stair treads with narrow and accurate joints. Fabricator must demonstrate ability to fabricate these elements to the lines and contours as indicated on the Contract Drawings, by submission of photographs of similar projects.
- (C) Installation Company Qualifications: Erection of stonework shall be by a firm that can exhibit proof of a minimum five (5) years of prior successful experience with stone installations of equivalent type and similar scope to this Project.

9.95G.4. SUBMITTALS.

All submittals shall be as per NYC DOT Standard Highway Specifications, under Division 1 Contract Requirements, **Section 1.06.13.**

- (A) Submit complete data on quarry facilities for each stone type and on fabrication facilities for stonework. Include information of location, production capabilities, and the nature and character of each stone selected.

- (B) Stone Material Properties Data: Material properties data for each stone material type shall be submitted by the stone suppliers and certified as representative of the properties of stone material to be supplied for the Project. Include references to appropriate ASTM tests as conducted by a certified testing laboratory.
- (C) Submit each installation material item including fitting hardware, fastening devices, accessories, mortars, caulk, grouts, and the like.
- (D) Shop Drawings: The Contractor shall submit Shop Drawings when required, in accordance with the requirements of the **Section 1.06.13** of NYC DOT Standard Highway Specifications. Submit overall and detailed plans, sections, and elevations as necessary to accurately and fully describe the required elements for each stone material type furnished and each related application condition of the Project work. Include necessary coordination and preparation of composite drawing information together with installation trades contractors of different components, including railings, edgings, and concrete foundations. Establish and verify locations of expansion joints, which shall be coordinated with concrete shop drawings. All shop drawings for items under this section shall be submitted concurrently.
1. Submit complete Cutting and Setting Drawings showing shop sizes, shapes, thickness, jointing, anchoring, connection with other work, typical and special anchoring details, supports, dimensions, and setting numbers for each piece. Setting Drawings shall show relationship to adjoining construction and, after fabrication and final selection, shall indicate the location of each stone unit with a number designation corresponding to number marked on each unit. Show location layouts and patterns coordinating with design drawing and related survey control points and dimensions. Establish and verify dimensions with concrete work of on-site walls, masonry layouts and patterns, and other like conditions. Show location, type, and extent of anticipated field cutting and finishing. Do not fabricate any stone (except for samples) until Engineer has approved Shop Drawings for fabrication.
 2. Statements of Qualifications: Submit to identify and exhibit Installation Company qualifications as specified herein.
 3. Stone Samples: Submit set of 3 unit samples, minimum 2 square feet surface area, of each stone material and each stone finish type. Include in each set the full and extreme range of exposed color, texture, and finish to be expected in the completed work. Engineer's review will be in for color, texture, and finish only. Compliance with all other

requirements is the exclusive responsibility of the Contractor. Approved samples shall set the finish standard for the work.

4. Grout and Sealant Material Samples: Submit samples for each condition of use to show selected colors. Submit samples of eight colors closest in coloration to the granite when the granite is wetted.
5. Epoxy Adhesive Samples: Submit sample of epoxy joint with two granite pavement band units bonded with both thermal-finish surfaces meeting flush, minimum 1 linear foot.
6. Stone Support and Accessory Items Samples: Submit samples for each type and material composition, full size.

(F) MOCK UPS.

Construct at the earliest possible time and at approved location, before proceeding with work and after Engineer's approval of submitted samples. Submit proposed locations for typical field samples/mockups, and receive approval of locations prior to construction of field samples. Mock-up shall be per Contract Drawings unless otherwise directed, using materials, setting bed, pattern and joint treatment. The field mock-up/sample must be approved by the Engineer before the actual work may proceed. If necessary remove and reconstruct field sample until approved. Accepted mock-up establishes minimum standard of quality and workmanship for granite masonry work of this section. Demolish and remove field sample at a time approved by Engineer when no longer required to serve as standard of work. Mock-up may be incorporated as part of work if conforming to be specified requirements, and if accepted by engineer. Provide and construct mock-ups as follows:

- (1) Granite Curbwall: minimum 6 linear feet, in combination with Granite Steps
- (2) Granite Steps: minimum 6 linear feet
- (3) Granite Pavement Bands: minimum 10 square feet.

(G) Delivery, Storage, and Handling

Protect, store, and handle stone materials as recommended by stonework fabricating company in addition to requirements specified herein.

Properly crate and band stone units for shipment receiving at job site. Crating of stone and packaging accessory item shall be respective and related to the conditions for installation.

Handle each stone material type to prevent chipping, breakage, soiling, or other damage. Do not use pinch or wrecking bars

without protecting edges of stone with wood or other rigid materials.

Store stone materials on wood skids or pallets, covered with non-staining, waterproof membrane. Place and stack skids and stone to distribute weight evenly and to prevent breakage or cracking of stone. Protect stone from detrimental weather conditions with waterproof, non-staining covers or enclosures, but allow air to circulate around stone during extended period of storage.

(H) Environmental Requirements

Protect mortar materials and stone accessories from weather, moisture, and contamination with earth and other foreign materials. Do not use mortar materials to install stone when the temperature is below 4 degrees Celsius (40 degrees Fahrenheit). When exposed during construction activities, protect partially completed stonework against weather when work is not in progress. Cover top of uncompleted work sections with strong, waterproof, non-staining membrane extending down both sides of walls and anchor securely in place.

9.95G.5. METHODS.

(A) Preparation

Verify all measurements and dimensions and coordinate the installation of support structures for this work. Coordinate and schedule stonework fabrications and installations with the work of other related trades and separate contracts. Give particular attention to the location and size of cutouts required to accommodate mechanical, electrical, and other work or adjoining construction.

Verify that surface of foundation has suitably-roughened texture to receive setting mortar.

Clean dirty or stained stone surfaces by removing soil, stains, and foreign materials before setting. Clean stone by thoroughly scrubbing with fiber brushes and then drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh materials or abrasives.

Protection: Apply protective wax coating to stone surface if adhesive, mortar, epoxy adhesive or any other setting material would stain the stone. Wax shall be applied carefully to prevent contact with surfaces to be joined. Wax shall be steam-cleaned off after work is completed.

(B) Installation

Do not use stone units with chips, cracks, voids, stains, or other defects that might be visible in the finished work. If installed, remove and replace with units meeting specification requirements and approval of the Engineer.

Execute work by skilled mechanics, and employ skilled stone fitters/cutters at site for necessary field cutting, as stone is set. Clean stone (especially edges) before setting.

Set stone in accordance with Contract Drawings and final approved shop drawings. Provide anchors, supports, fasteners, and other attachments shown, or necessary to secure stone in place. Shim and adjust accessories as required for proper and correct setting of stone. Completely fill holes, slots and other sinkages for anchors, dowels, fasteners and supports with epoxy grout as applicable to conditions during setting of stone. Provide compressible filler in dowel holes as necessary to insure that stone units do not bear on dowels such that may cause cracking.

Setting Bed: Before starting the installation, the concrete slab or fill surface shall be cleaned to remove soil and loose mortar. Dry or dusty concrete surfaces shall be wet down or washed and excess water removed just prior to the application of setting bed. Immediately prior to placing the setting bed apply a slurry bond coat of approved Setting Adhesive. The bedding course shall be placed, screeded and shaped upon the concrete base, its finished depth shall be as shown on the detail drawings and at correct depth to achieve required grades. The bedding shall be shaped to a true surface. For paving, the surface shall be parallel with surface of finished paving. For monolithic elements, the surface shall be parallel with the seating surface of the elements. The surface shall be formed by means of template or striking board (12' X 2" X 6" board). The bed shall then be struck off until proper alignment is secured. The area of bedding placed in any work day shall be scheduled so that no bedding course remains at the end of the day without stone installed. After final shaping, the bedding course shall not be disturbed prior to laying the stone.

Stone Setting, General: Wet stones thoroughly before setting and set stones before initial mortar set occurs. Do not set stone on dry mortar bed.

For paving installation, apply slurry bond coat of approved Setting Adhesive to dry setting bed with a flat trowel according to manufacturer's directions. Apply skim coat of same slurry grout to underside of stones immediately before placement. Do not allow slurry to contact exposed surfaces of

stone. After each section is laid, the entire area shall be beaten with a wooden block to produce a level surface and to embed the units in the mortar. Beating shall be done before mortar takes an initial set. Paving shall be laid in such a manner that units will not come loose from the effects of frost or water seepage.

Pavement areas shall be laid such that changes in slope shall be gradual. The intent of the grading and layout are to minimize instances where differential slopes result in instances where abutting stone pieces cannot be laid flush along joints. However, where differential condition occurs in excess of 1/16" variance in height or greater, the Contractor shall grind horizontal surfaces to eliminate differential, extending grinding as necessary to eliminate differential, as determined by the Engineer. The Contractor shall then flame ground areas to match surrounding pavement finish. Cutting of stone pieces on lines other than joints indicated on Contract Drawings shall not be done without the written consent of the Engineer and approved layout of such additional joints.

For monolithic stone installation, including stair treads and curbswalls, apply slurry bond coat of approved Setting Adhesive to all surfaces to contact setting bed, and set stone unit in wet setting bed, providing supports as necessary to achieve accurate grades. Set stones with anchor dowels in full bed of mortar with back-up spaces and vertical joints slushed full, unless otherwise indicated. Stone surface shall be beaten with a wooden block as necessary to embed units in the mortar.

For veneer installation, anchor stone masonry to concrete or other masonry structural wall with approved anchors secured per manufacturer instructions. Embed veneer anchors in mortar joints of stone masonry at least halfway, but not less than 1-1/2 inches, through stone masonry and with at least a 5/8-inch cover on exterior face. Space anchors to provide not less than one anchor per 2 sq. ft. of wall area. Install additional anchors within 12 inches of openings, sealant joints, and perimeter at intervals not exceeding 12 inches.

Anchor veneer stone with stone anchors where indicated. Install anchors by fastening to substrate and inserting tabs and dowels into kerfs and holes in stone units. Provide compressible filler in ends of dowel holes and bottoms of kerfs to prevent end bearing of dowels and anchor tabs on stone. Fill remainder of anchor holes and kerfs with mortar.

For both monolithic and veneer stone installation, set stone in full bed of mortar with full head joints unless otherwise indicated. Build anchors into mortar joints as stone is set. Rake out joints for pointing with mortar before setting mortar

has hardened. Rake joints to uniform depths with square bottoms and clean sides.

For all granite installation, grout joints shall be installed with approved material in accordance with manufacturer instructions. Grout joints as soon as possible after initial set of setting bed. Employ all methods necessary to prevent dirt or other debris to enter ungrouted joints. If dirt or debris of any kind enters ungrouted joints despite these measures, clean joints completely according to grout manufacturer requirements before proceeding to grout installation. Force grout into joints, taking care not to smear grout on adjoining exposed stone surfaces. Compact each layer thoroughly and allow to it become thumbprint hard before applying next layer. Tool joints, when pointing mortar is thumbprint hard, with a smooth jointing tool to produce slightly concave profile. Cure grout as recommended by manufacturer.

Provide caulk joints when meeting adjacent vertical elements, at expansion joints, where shown on Contract Drawings, and where required to prevent stone cracking.

Caulk/Expansion Joints: Keep sealant joints free of dirt, debris, mortar, and other rigid materials. Caulk joints shall be finished cleanly per approved sample installation, with slightly concave section. Joints shall be one-quarter (1/4") inch in width unless otherwise specified on the Contract drawings. Expansion joints shall be filled with non-extruding premolded joint filler to within 3/4" of the pavement surface. All caulk and expansion joints shall then be filled with two part urethane sealant over a foam backer rod. Sealant to be of an approved color to match surface of pavement, or other color as directed by the Engineer in consultation with the City's Landscape Architect. Prepare joints and apply sealants of type and at locations indicated to comply with applicable requirements of the sealant manufacturer's instructions.

Include all field cutting, drilling, and fitting of stonework not performed in the shop and required to accommodate the work of other trades or contracts. In cutting and fitting, carefully cut and grind edges to a neat tight fit. Do cutting in such manner so as not to impair strength or appearance of stone.

Use physical templates for all cutting and drilling and obtain required templates from appropriate trades.

(C) Erection Tolerances

Variation from true horizontal alignment or curvature: Do not exceed 1/8".

Variation from Plumb for lines and surfaces of walls and arises: Do not exceed 1/8" (3mm) in 10' (3.05m).

Variation from Level, Slope, and Grade: For grades, slopes, level conditions, and other conspicuous lines indicated, surfaces shall be true to grade, slope, and line indicated within 1/8" in any 20'.

Variation in Cross-Sectional Dimensions: For thickness of walls and other conditions from dimensions shown, do not exceed minus 1/8", nor plus 1/8".

Offset at Joints: Do not exceed plus or minus 1/16".

Tolerances shall not be accumulative.

(D) Protection

Prevent materials used for installing work of this Section from staining or damaging the exposed surfaces of stone units or the exposed surfaces of the adjoining construction. Immediately remove mortar, grout, wax, or other detrimental materials from exposed surfaces of stone or adjoining construction. After installation, protect stonework from damage during subsequent construction activities.

(E) Cleaning and Repairing

At Completion of Work, replace defective, broken, or damaged stone units installed as work of this Section. Unfilled or defective joints shall be properly repaired. After completion of any repair work, clean exposed surfaces of all stone units installed as work of this Section with clean water and stiff fiber brushes until all dirt, stains, efflorescence, mortar, and other defacements are removed. Use cleaner and procedures recommended by stone quarry and stone fabricating company. Do not use wire brushes, metal scrapers or acids. Protect adjacent surfaces from damage during cleaning operations.

9.95G.6. MEASUREMENT. The quantity to be measured for payment shall be:

- (A) GRANITE PAVING BANDS: The number of square feet of granite paving bands actually installed on setting bed with joints as indicated on the Contract Drawings, to the satisfaction of the Engineer.
- (B) GRANITE CURBWall: The number of cubic feet of granite curbwall installed on setting bed with joints as indicated, to the satisfaction of the Engineer. No additional measurement will

be made for granite depth in excess of the minimum embedment depth indicated on the Contract Drawings.

- (C) GRANITE STAIR TREADS: The number of linear feet of granite stair treads as measured along the nose of the tread actually installed, to the satisfaction of the Engineer, in accordance with the drawings, irrespective of thickness, depth or width of tread section.

9.95G.7. PRICES TO COVER.

- (A) GRANITE PAVING BANDS:

The contract price for Granite Paving Bands per square foot shall cover that cost of all labor, materials, fabrication, equipment, insurance, and necessary incidentals required and completing the work; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

- (B) GRANITE CURBWALL:

The contract price for Granite Curbwall per cubic foot shall cover that cost of all labor, materials, fabrication, equipment, insurance, and necessary incidentals required and completing the work; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

- (C) GRANITE STAIR TREADS:

The contract price for Granite Stair Treads per linear foot shall cover that cost of all labor, materials, fabrication, equipment, insurance, and necessary incidentals required and completing the work; all in accordance with the Contract Drawings, the specifications and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
9.95 GPB	GRANITE PAVING BANDS	S.F.
9.95 GCB	GRANITE CURBWALL	C.F.
9.95 GST	GRANITE STAIR TREADS:	L.F.

SECTION BMP-GI-4.15ES
Engineered Soil

BMP-GI-4.15ES.1 DESCRIPTION

Under this section the contractor shall provide all labor, materials, equipment, insurance, and incidentals required for furnishing, amending (if required), placing and preparing the Engineered Soil for seeding and/or plant material as shown on the Contract Drawings and/or as directed by the Engineer.

BMP-GI-4.15ES.2 MATERIALS.

- (A) Engineered Soil is an integral part of the Green Infrastructure System; as such, certification of its material properties is subject to the testing protocols of the Contractor's Quality Control (QA) plan and quality assurance testing by DDC's Quality Assurance and Construction Safety (QACS) Bureau. The QC requirements relative to Engineered Soil are detailed below. The Contractor shall strictly comply with all requirements of his QA plan. Sufficient lead time is required to develop an appropriate plan for mixing methodologies and ratios that will provide reliable results to meet the parameters listed below.
- B. Engineered Soil shall be a loamy sand (70-85% sand) as classified by the U.S. Department of Agriculture (USDA). Based on test results, a determination will be made to ensure that the sand fraction analysis results are capable of supporting proposed vegetation. Engineered Soil shall be free of refuse, hard clods, woody vegetation, stiff clay, construction debris (of any kind), boulders, stones larger than 1-1/2 inches, chemicals, or other deleterious material toxic to any vegetation used on this project.
- C. Engineered Soil shall have a minimum organic content of 3.0 percent and a maximum of 6.0 percent. If the source soil requires amendment to meet the Engineered Soil organic content requirement, leaf compost will be the only approved admixture. No soil mixing shall be permitted during or after Engineered Soil placement. Engineered Soil shall be tested for compliance with Contract specifications and submitted for approval prior to delivery to the site.
- D. The organic content of soils shall be determined by a laboratory using the loss on ignition method as described in the Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware. Bulletin #493, Revised October 2009 or latest.
- E. The gradation of Engineered Soil shall be determined by a laboratory using the methods of the USDA Soil Survey

Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0; November 2004. The gradation of the Engineered Soil as determined by USDA classifications shall be within the following ranges:

Ranges:	<u>0-08% gravel</u>
	<u>75-85% sand</u>
	<u>10-15% silt</u>
	<u>5- 15% clay</u>

Classification/sieve size:	<u>2" to 2.0 mm</u>	<u>gravel</u>
	<u>2.0 mm to 0.05 mm</u>	<u>sand</u>
	<u>0.05 mm to 0.002 mm</u>	<u>silt</u>
	<u><0.002 mm</u>	<u>clay</u>

In addition to the above gradation the Contractor shall provide the percentage of particle sizes corresponding to U.S.D.A. classifications:

Very coarse sand (2.0 mm to 1.0 mm)
 Coarse sand (1.0 to 0.5 mm)
 Medium sand (0.5 mm to 0.25 mm)
 Fine sand (0.25 to 0.1 mm)
 Very fine sand (0.1 to 0.05 mm)
 Silt (0.05 to 0.002 mm) Clay (<0.002 mm)

- F. The pH value of Engineered Soil shall be (5-7.0) as determined by an approved laboratory using soil pH (Water (1:1. V:V)) procedures as described in the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0, November 2004. Amendment of soil to lower pH to meet Contract requirements is not permitted.
- G. The soluble salt value of the Engineered Soil shall be (0-0.4mmhos cm⁻¹) as determined by an approved laboratory using the soluble salt (1:2(V:V)) procedures as described in the Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware, Bulletin #493, Revised October 2009 or latest.
- H. The value for Kjeldahl Nitrogen shall be as outlined below as determined by an approved laboratory using the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0, November 2004.

Kjeldahl N Acceptable range is 0.06% to 0.25% (with nitrate (NO₃) form of nitrogen not to exceed 20 ppm)

- I. The value for Macro (P, K) and Micro Nutrients (Mg, Ca, Mn, Zn, Cu and B) shall be as outlined below as determined by an approved laboratory using the procedures as described in the "Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware, Bulletin #493, Revised October 2009 or latest.

P	Acceptable range is 80 lbs/acre to 100 lbs/acre
K	Acceptable range is 100 lbs/acre to 300 lbs/acre
Ca	Acceptable range is 900 lbs/acre to 2,800 lbs/acre
Mg	Acceptable range is 300 lbs/acre to 600 lbs/acre
K+Ca+Mg	Not greater than 3,700 lbs./acre*
Mn	Acceptable range is 2 ppm to 20 ppm
B	Acceptable range is 0.8 ppm to 3ppm
Cu	Acceptable range is 0.1 ppm to 4.0 ppm
Z	Acceptable range is 1 ppm to 12 ppm
%Organic	3.0% to 6% (loss on ignition)

- J. An acid-producing soil test is required to determine the potential for decreases in soil pH after oxidation. The pH value of the solution shall be greater than 4.5 as determined by the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0, November 2004.

- K. Engineered Soil shall not contain any traces of hydrocarbons, petroleum products, chemically prohibited substances or any other elements considered to be toxic to any vegetation used on this Project. The Engineered Soil shall not smell of petroleum or give off other unnatural or toxic odors. Regardless of prior acceptance of sample material should the Engineered Soil delivered to the site seem suspicious in any way; the Engineer shall reject the material. Should the Contractor strongly disagreed with the Engineer's Determination, the Contractor may appeal. According to the following APPEAL PROCESS:

APPEAL PROCESS: The Engineer shall check for discoloration and evidence of unacceptable contents. If the Engineer suspects that the fill possesses hazardous or contaminated characteristics, it will be rejected. Should the Contractor contest the Engineer's determination, then samplings of the rejected soil will be sent to a Laboratory which is certified by the NYSDOH Environmental Laboratory Accreditation Program (E.L.A.P.) for the selected analytical method.

Environmental Analysis shall include, but not be limited to, U.S.E.P.A. Standard Test Methods for determination of Contaminant Concentrations and the Toxicity Characteristic Leaching Procedure (T.C.L.P.) for determination of Leachability of at least 39

Components. The extraction portion of the T.C.L.P. Test shall be performed according to E.P.A.-SW846 Method 1311. Analysis of the extract shall be performed by E.P.A. Methods SW846; 8021 for Volatiles, 8270 for Semi-Volatiles and 6010 for Priority Pollutant Metals (P.P.L.), including lead. Other characteristic tests may include those for ignitability, corrosivity, and reactivity, as deemed required by the Engineer.

The Test Results shall be compared with Guidance Values developed by the NYSDEC Division of Spills Management, known as "Spill Technology And Remediation Series"(S.T.A.R.S.) dated 8/92 (Reprinted 7/93), which contains criteria for determining whether petroleum-contaminated soil meets beneficial reuse conditions.

For analyses which are not included in the S.T.A.R.S. guidance, the Test Results shall be compared with Guidance Values developed by the New York State Department of Environmental Conservation (NYSDEC), Bureau of Program Management, Technology Section, for the Division of Hazardous Waste Remediation.

These N.Y.S. D.E.C. Guidance Values are known as "Recommended Soil Cleanup Objectives" or "Appendix A" (Revised 1/24/94), and consist of Table 1 for V.O.C.'s, Table 2 for Semi-V.O.C.s, Table 3 for Organic Pesticides/Herbicides and P.C.B.'s, and Table 4 for Heavy Metal. Final values shall be determined by either a health-based level, or a concentration necessary to protect groundwater quality, whichever is lower. If the soil fails, then the Contractor shall be responsible for:

- 1) Payment of fees for services of the N.Y. State certified lab,
- 2) Removal and legal disposal of Fill,
- 3) Replacement with acceptable fill and
- 4) All other expenses, as well as potential fines that may be incurred.

BMP-GI-4.15ES.3. METHODS.

- A. REFERENCE STANDARDS: Recommended Soil Testing Procedures for the Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station - University of Delaware - Bulletin #493, Revised October 2009 or latest. As well as the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0 November 2004.
- B. SUBMITTALS: Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications. Prior to the procurement of Engineered Soil, the following information and samples are required for review and approval for each source:

1. Proposed material source and vendor.

2. A sample of the proposed material, taken with a representative of the Department, indicating the method of sampling and location of the sample.
3. The Contractor shall submit to the Engineer the name and location of the borrow (source) or stockpile site(s) and the estimated quantity of material available. The Contractor shall provide a notarized letter from the owner(s) of the proposed borrow site and/or stockpile site(s) indicating ownership of the proposed site(s) and a commitment to supply a specified minimum quantity of material for this project. Additionally, the supplier shall provide a certificate of clean fill and/or source materials for topsoil, signed by a NYS licensed PE/RLA or RA. To avoid delays in planting and seeding, the Contractor shall immediately begin to secure and test Engineered Soil at least one month in advance of the material actually being needed on site. This will allow sufficient time to blend the specified soil mix and make all the necessary adjustments in the mixing process.
4. Results of the organic content analyses conducted in accordance with the above referenced standard, Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware. Bulletin #493, Revised October 2009 or latest.
5. Results of the USDA soil texture gradation (sand, silt and clay) analyses and sand sieve analyses, with full reporting of all information in USDA sieve sizes, in accordance with the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0 November 2004.
6. Results of the pH tests conducted in accordance with the above referenced standard, USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0 November 2004.
7. Results of the soluble salts test conducted in accordance with the above referenced standard, Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware. Bulletin #493, Revised October 2009 or latest.
8. Results of the Nutrient analyses test conducted in accordance with the above referenced standard,

Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware. Bulletin #493, Revised October 2009 or latest.

9. Results of the Inorganic nitrogen and total Kjeldahl nitrogen tests conducted in accordance with the above referenced standard, USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0 November 2004.
10. Results of the acid-producing (iron sulfide) test conducted in accordance with the methodologies utilized by the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0 November 2004.

NOTE: Due to the agricultural nature of some of the Quality Control testing the Contractor is notified that both Rutgers University and Cornell University can perform nearly all agricultural testing required, one exception may be the acid-producing test. Turnaround times for results may vary from standard soils testing. However, all agricultural testing procedures must be performed in accordance with the above referenced standards and the USDA Soil Survey Laboratory Methods Manual (No. 42, November 2004) and the Recommended Soil Testing Procedures for The Northeastern United States, 3RD Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware. Bulletin #493, Revised October 2009 or latest. If another lab is proposed, the Contractor can submit written certification from the proposed lab certifying that the lab will utilize the same methodologies for soil testing as outlined in these specifications.

- C. ADDITIONAL TESTING: As delivery of Engineered Soil to the site progresses, the following additional testing shall be conducted by the Contractor on the Engineered Soil brought to the site. Frequency of testing is one for every 50 CY delivered. Results of tests shall be submitted to Engineer for review and approval.

1. Organic Content Testing in accordance with the Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware. Bulletin #493, Revised October 2009 or latest).

2. pH testing in accordance with the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0, November 2004.
 3. Soluble Salts testing in accordance with the Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware, Bulletin #493, Revised October 2009 or latest.
 4. Results of the Nutrient analyses test conducted in accordance with the Recommended Soil Testing Procedures for The Northeastern United States, 3rd Edition, Northeast Regional Publication, Agricultural Experiment Station, University of Delaware, Bulletin #493, Revised October 2009 or latest.
 5. Results of the Inorganic nitrogen and total Kjeldahl nitrogen tests conducted in accordance with the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0, November 2004.
 6. Results of the USDA soil texture gradation (sand, silt and clay) analyses and sand sieve analyses, with full reporting of all information in USDA sieve sizes, in accordance with the with the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0, November 2004.
 7. Results of the acid-producing (iron sulfide) test conducted in accordance with the methodologies utilized by the USDA Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42 Version 4.0; November 2004.
- D. The Contractor shall submit to Engineer the materials and procedures for amending soil, if appropriate. Amendment of soil is only permitted to meet the nutrient and organic requirements of the specifications. Nutrient modifications are only permitted through the use of the approved contract specified organic fertilizer and the organic amendment permitted is leaf compost, no other organic amendment is permitted.
- E. The Contractor shall submit quantity records on a weekly basis to Engineer.
- F. Material failing the frequency testing shall not be incorporated into the work and shall be removed from the site at the Contractor expense.

G. EXECUTION

1. Prior to procurement of Engineered Soil and starting delivery of soil, all approvals for those items required in Section entitled "SUBMITTALS" must have been given in writing to and accepted by the Engineer.
2. Prior to the placement of Engineered Soil, the subgrade must be accepted by the Engineer.
3. Engineered Soil shall be evenly placed to the thickness and configuration as directed by the Engineer or as shown on the plans. Engineered Soil shall not be placed when the subgrade or Engineered Soil is frozen, excessively wet, extremely dry, or in a condition otherwise detrimental to the proposed seeding, planting or soil structure.
4. The material delivered to the site shall be visually and continuously inspected by the Engineer during construction to ensure that it is consistently the same material previously approved and delivered to the site. If any foreign or off odors are detected, the Engineers reserves the right to refuse the material. If changes in material occur, soil delivery shall cease immediately, the Contractor shall not incorporate the new material into the work until the material meets these specifications. The Contractor shall test the new material as a new source and submit his results to the Engineer for his approval. If Engineer rejects the material, the Contractor shall immediately remove the material off the project site at no additional cost to the City. [See Subsection BMP-GI-4.15ES.2.K of this Specification.]
5. Placement of Engineered Soil shall be performed only when it can be followed within five (5) days by planting or seeding. After Engineered Soil placement and final grading, no heavy equipment, pickup trucks, or other construction vehicles shall be permitted to travel on these completed areas. The Contractor shall, through mechanical raking and hand grading with rakes and shovels, grade all areas around fences, pipes and other structures in preparation for seeding or planting.

6. The Contractor shall, as part of the Engineered Soil spreading operation, mechanically rake and clean all undesirable materials from the Engineered Soil prior to planting operations.
7. The Contractor shall dispose of all undesirable materials raked from the Engineered Soil, in accordance with the Specific Provisions.
8. The Contractor shall pay all costs, fees, etc. to rectify any deficiencies in placement of the Engineered Soil layer, to the acceptance of the Engineer.

BMP-GI-4.15ES.4. MEASUREMENT.

The quantity of Engineered Soil to be measured for payment under this item shall be the number of cubic yards of Engineered Soil actually incorporated in the finished work, measured in trucks used for delivery at the proposed site(s), in accordance with the Contract Drawings, the specifications, and to the satisfaction of the Engineer.

BMP-GI-4.15ES.5. PRICE TO COVER.

Payment per cubic yard of Engineered Soil shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals required to furnish and incorporate the Engineered Soil in full compliance with the requirements of the specifications and shall include, but not limited to, testing of materials and furnishing such samples for testing as may be required, all in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
BMP-GI-4.15ES	ENGINEERED SOIL	C.Y.

**SECTION E 260500
(NOT A BID ITEM)
COMMON WORK RESULTS FOR ELECTRICAL**

PART 1 - GENERAL

1.1 SUMMARY

(A) Section Includes:

Electrical equipment coordination and installation.
Grout.
Common electrical installation requirements.

1.2 COORDINATION

(A) Coordinate arrangement, mounting, and support of electrical equipment:

To provide for ease of disconnecting the equipment with minimum interference to other installations.
To allow right of way for piping and conduit installed at required slope.
So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

(B) Coordinate installation of required supporting devices in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

PART 2 - PRODUCTS

2.1 GROUT

(A) Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

(A) Comply with NECA 1.

- (B) Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
- (C) Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
- (D) Right of Way: Give to piping systems installed at a required slope.

PART 4 - MEASUREMENT AND PAYMENT

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

SECTION E 260519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

4.1 GENERAL

4.2 SUMMARY

(A) This Section includes the following:

Building wires and cables rated 600 V and less.
Connectors, splices, and terminations rated 600 V and less.

4.3 SUBMITTALS

- (A) Product Data: For each type of product indicated.
- (B) Field quality-control test reports.

4.4 QUALITY ASSURANCE

- (A) Electrical Components, Devices, and Accessories: Listed and labeled as defined in the NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- (B) Comply with New York City Electrical Code.

PART 5 - PRODUCTS

5.1 CONDUCTORS AND CABLES

(A) Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

Alcan Products Corporation; Alcan Cable Division.
American Insulated Wire Corp.; a Leviton Company.
General Cable Corporation.
Senator Wire & Cable Company.
Southwire Company.
AFC Cable Systems, Inc.
or an approved equivalent.

(B) Copper Conductors: Comply with NEMA WC 70.

(C) Conductor Insulation: Comply with NEMA WC 70 for Types XHHW.

5.2 CONNECTORS AND SPLICES

- (A) Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

AFC Cable Systems, Inc.
Hubbell Power Systems, Inc.
O-Z/Gedney; EGS Electrical Group LLC.
3M; Electrical Products Division.
Tyco Electronics Corp.
or an approved equivalent.

- (B) Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 6 - EXECUTION

6.1 CONDUCTOR MATERIAL APPLICATIONS

- (A) Feeders: All feeders shall be copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- (B) Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

6.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- (A) Service Entrance: Type XHHW, single conductors in raceway.
- (B) Feeders: Type XHHW, single conductors in raceway.
- (C) Branch Circuits: Type XHHW, single conductors in raceway.

6.3 INSTALLATION OF CONDUCTORS AND CABLES

- (A) Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- (B) Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- (C) Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

6.4 CONNECTIONS

- (A) Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- (B) Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- (C) Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

6.5 FIELD QUALITY CONTROL

- (A) Perform tests and inspections and prepare test reports.
- (B) Tests and Inspections:

After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors, and branch conductors for compliance with requirements.

Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each splice in cables and conductors No. 3 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner.

Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.

Record of Infrared Scanning: Prepare a certified report that identifies splices checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

- (C) Test Reports: Prepare a written report to record the following:

Test procedures used.

Test results that comply with requirements.

Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

- (D) Remove and replace malfunctioning units and retest as specified above.

PART 7 - MEASUREMENT AND PAYMENT

7.1 MEASUREMENT

- (A) The quantity of Conductors and Cables to be paid for under items E 260519 A, E 260519 B, E 260519 C, E 260519 D, E 260519 E, E 260519 F, and E 260519 G shall be the actual number of linear feet of each size conductors and cables actually installed to complete the work, to the satisfaction of the Engineer. When multiple lengths of conductors are used as a cable, each length of conductor shall be measured separately.

7.2 PRICES TO COVER

- (A) The unit price bid per linear foot of each size conductor or cable shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing conductor and cable, and all associated connectors and splices, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 260519 A	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 3/0 AWG WIRE)	L.F.
E 260519 B	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 2 AWG WIRE)	L.F.
E 260519 C	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 4 AWG WIRE)	L.F.
E 260519 D	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 6 AWG WIRE)	L.F.
E 260519 E	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 8 AWG WIRE)	L.F.
E 260519 F	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 12 AWG WIRE)	L.F.
E 260519 G	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (NO. 10 AWG WIRE)	L.F.

SECTION E 260526
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- (A) This Section includes methods and materials for grounding systems and equipment.

1.2 SUBMITTALS

- (A) Product Data: For each type of product indicated.
- (B) Qualification Data: For testing agency and testing agency's field supervisor.
- (C) Field quality-control test reports.

1.3 QUALITY ASSURANCE

- (A) Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association (NETA) or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.

- 1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association to supervise on-site testing specified in Section 3.5 of this Specification.

- (B) Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- (C) Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 - PRODUCTS

2.1 CONDUCTORS

- (A) Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- (B) Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Stranded Conductors: ASTM B 8.
 - 3. Tinned Conductors: ASTM B 33.
 - 4. Bonding Cable: No. 8, No. 10 , No. 12 AWG
 - 5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
 - 6. Bonding Jumper: Copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
 - 7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors, terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

2.2 CONNECTORS

- (A) Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
- (B) Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts.

 Pipe Connectors: Clamp type, sized for pipe.

- (C) Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.3 GROUNDING ELECTRODES

- (A) Ground Rods: Copper-clad steel; 5/8 inch in diameter by 96 long.

PART 3 - EXECUTION

3.1 APPLICATIONS

- (A) Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.

(B) Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors, except at test wells and as otherwise indicated.

3.2 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

- (A) Comply with IEEE C2 grounding requirements.
- (B) Grounding Manholes and Handholes: Install a driven ground rod through manhole or handhole floor, close to wall, and set rod depth so 4 inches will extend above finished floor. If necessary, install ground rod before manhole is placed and provide No. 1/0 AWG bare, tinned-copper conductor from ground rod into manhole through a waterproof sleeve in manhole wall. Protect ground rods passing through concrete floor with a double wrapping of pressure-sensitive insulating tape or heat-shrunk insulating sleeve from 2 inches above to 6 inches below concrete. Seal floor opening with waterproof, nonshrink grout.
- (C) Grounding Connections to Manhole Components: Bond exposed-metal parts such as inserts, cable racks, pulling irons, ladders, and cable shields within each manhole or handhole, to ground rod or grounding conductor. Make connections with No. 4 AWG minimum, stranded, hard-drawn copper bonding conductor. Train conductors level or plumb around corners and fasten to manhole walls. Connect to cable armor and cable shields as recommended by manufacturer of splicing and termination kits.

3.3 EQUIPMENT GROUNDING

- (A) Install insulated equipment grounding conductors with all feeders and branch circuits.
- (B) Metal and Wood Poles Supporting Outdoor Lighting Fixtures: Install grounding electrode and a separate insulated equipment grounding conductor in addition to grounding conductor installed with branch-circuit conductors.

3.4 INSTALLATION

- (A) Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

(B) Ground Rods: Drive rods until tops are 2 inches below finished floor or a minimum of 18 inches below final grade, unless otherwise indicated.

1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating, if any.
2. For grounding electrode system, install at least two rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.

(C) Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install so vibration is not transmitted to rigidly mounted equipment.
3. Use exothermic-welded connectors for outdoor locations, but if a disconnect-type connection is required, use a bolted clamp.

3.5 FIELD QUALITY CONTROL

(A) Testing Agency: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal. Make tests at ground rods before any conductors are connected.
 - a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.

b. Perform tests by fall-of-potential method according to IEEE 81.

(B) Report measured ground resistances that exceed the following values:

Power and Lighting Equipment or System with Capacity 500 kVA and Less: 10 ohms.
Substations and Pad-Mounted Equipment: 5 ohms.
Manhole Grounds: 10 ohms.

(C) Excessive Ground Resistance: If resistance to ground exceeds specified values, notify the Engineer promptly and include recommendations to reduce ground resistance.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

(A) The quantity of Grounding and Bonding for Electrical Systems to be paid for under item E 260526 shall be the actual number of linear feet of grounding conductors installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICE TO COVER

(A) The unit price bid per linear foot of conductor shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing grounding conductors, and all associated connectors, electrodes, ground rods, bonding straps, and jumpers, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 260526	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	L.F.

SECTION E 260529
(NOT A BID ITEM)
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

(A) This Section includes the following:

1. Hangers and supports for electrical equipment and systems.
2. Construction requirements for concrete bases and electrical enclosure bollards.

1.2 DEFINITIONS

(A) RMC: Rigid metal conduit.

1.3 PERFORMANCE REQUIREMENTS

(A) Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

1.4 SUBMITTALS

(A) Product Data: For the following:

1. Steel slotted support systems.
2. Steel pipe for electrical enclosure bollards.

(B) Shop Drawings: Signed and sealed by a qualified professional engineer. Show fabrication and installation details and include calculations for the following:

1. Steel slotted channel systems. Include Product Data for components.
2. Equipment supports.

(C) Welding certificates.

1.5 QUALITY ASSURANCE

(A) Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

(B) Comply with New York City Electrical Code.

1.6 COORDINATION

- (A) Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements.

PART 2 - PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- (A) Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
 - a. Allied Tube & Conduit.
 - b. Cooper B-Line, Inc.; a division of Cooper Industries.
 - c. ERICO International Corporation.
 - d. GS Metals Corp.
 - e. Thomas & Betts Corporation.
 - f. Unistrut; Tyco International, Ltd.
 - g. Wesanco, Inc.
 - h. Or an approved equivalent.
2. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
3. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
4. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
5. Channel Dimensions: Selected for applicable load criteria.

- (B) Raceway and Cable Supports: As described in National Electrical Contractors Association NECA 1-2010 and NECA 101-2006.
- (C) Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- (D) Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
- (E) Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
- (F) Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
 - 1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened Portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
 - a. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:
 - 1) Hilti Inc.
 - 2) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - 3) MKT Fastening, LLC.
 - 4) Simpson Strong-Tie Co., Inc.; Masterset Fastening Systems Unit.
 - 5) or an approved equivalent.
 - 2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened Portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
 - a. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- 1) Cooper B-Line, Inc.; a division of Cooper Industries.
 - 2) Empire Tool and Manufacturing Co., Inc.
 - 3) Hilti Inc.
 - 4) ITW Ramset/Red Head; a division of Illinois Tool Works, Inc.
 - 5) MKT Fastening, LLC.
 - 6) Or an approved equivalent.
3. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to Manufacturers Standardization Society MSS Type 18; complying with MFMA-4 or MSS SP-58.
 4. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
 5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
 6. Toggle Bolts: All-steel springhead type.
 7. Hanger Rods: Threaded steel.

2.2 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- (A) Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.

2.3 STEEL PILE ELECTRICAL ENCLOSURE BOLLARDS

- (A) Description: Steel pipe bollards for electrical box enclosures shall be furnished and painted in accordance with the details shown on the Contract Drawings.

PART 3 - EXECUTION

3.1 APPLICATION

- (A) Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.

3.2 SUPPORT INSTALLATION

- (A) Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- (B) Raceway Support Methods: In addition to methods described in NECA 1, Electrical Metallic Tubing (EMT), Intermediate Metal Conduit (IMC), and Rigid Metal Conduit (RMC) may be supported by openings through structure members, as permitted in New York City Electrical Code.

- (C) Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.
- (D) Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
 - 1. To Wood: Fasten with lag screws or through bolts.
 - 2. To New Concrete: Bolt to concrete inserts.
 - 3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
 - 4. To Existing Concrete: Expansion anchor fasteners.
 - 5. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches thick.
 - 6. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
 - 7. To Light Steel: Sheet metal screws.
 - 8. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet seismic-restraint strength and anchorage requirements.
- (E) Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

- (A) Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- (B) Field Welding: Comply with AWS D1.1/D1.1M.
- (C) Construct concrete bases in accordance with Contract Drawings and specifications.
- (D) Use 3000-psi, 28-day compressive-strength concrete.
- (E) Anchor equipment to concrete base.

- (F) Construct bases in accordance with the details shown on the Contract Drawings and as directed by the Engineer. Concrete shall be pigmented to match that of the adjacent plaza pavement.

3.4 PAINTING

- (A) Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.

- (B) Touchup: Comply with requirements for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.
- (C) Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

PART 4 - MEASUREMENT AND PAYMENT

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

SECTION E 260533
RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- (A) This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

1.2 DEFINITIONS

- (A) LFMC: Liquidtight flexible metal conduit.

1.3 SUBMITTALS

- (A) Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- (B) Shop Drawings: For the following raceway components. Include plans, elevations, sections, details, and attachments to other work.

Custom enclosures and cabinets.

For handholes and boxes for underground wiring, including the following:

- Duct entry provisions, including locations and duct sizes.
- Frame and cover design.
- Grounding details.
- Dimensioned locations of cable rack inserts, and pulling-in and lifting irons.
- Joint details.

1.4 QUALITY ASSURANCE

- (A) Electrical Components, Devices, and Accessories: Listed and labeled as defined in New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- (B) Comply with New York City Electrical Code.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

(A) Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. AFC Cable Systems, Inc.
2. Alflex Inc.
3. Allied Tube & Conduit; a Tyco International Ltd. Co.
4. Anamet Electrical, Inc.; Anaconda Metal Hose.
5. Electri-Flex Co.
6. Manhattan/CDT/Cole-Flex.
7. Maverick Tube Corporation.
8. O-Z Gedney; a unit of General Signal.
9. Wheatland Tube Company.
10. or an approved equivalent.

(B) Rigid Steel Conduit: ANSI C80.1.

(C) LFMC: Flexible steel conduit with PVC jacket.

(D) Joint Compound for Rigid Steel Conduit: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

2.2 METAL WIREWAYS

(A) Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Cooper B-Line, Inc.
2. Hoffman.
3. Square D; Schneider Electric.
4. or an approved equivalent.

(B) Description: Sheet metal sized and shaped as indicated, NEMA 250, Type 1, unless otherwise indicated.

(C) Fittings and Accessories: Include couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

(D) Wireway Covers: Screw-cover type.

(E) Finish: Manufacturer's standard enamel finish.

2.3 BOXES, ENCLOSURES, AND CABINETS

(A) Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
2. EGS/Appleton Electric.
3. Erickson Electrical Equipment Company.
4. Hoffman.
5. Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
6. O-Z/Gedney; a unit of General Signal.
7. RACO; a Hubbell Company.
8. Robroy Industries, Inc.; Enclosure Division.
9. Scott Fetzer Co.; Adalet Division.
10. Spring City Electrical Manufacturing Company.
11. Thomas & Betts Corporation.
12. Walker Systems, Inc.; Wiremold Company (The).
13. Woodhead, Daniel Company; Woodhead Industries, Inc. Subsidiary.
14. or an approved equivalent.

(B) Sheet Metal Outlet and Device Boxes: NEMA OS 1.

(C) Metal Floor Boxes: Cast iron, fully adjustable, rectangular.

(D) Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

(E) Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.

(F) Hinged-Cover Enclosures: NEMA 250, Type 4X, with continuous-hinge cover with flush vandal resistant latch, unless otherwise indicated.

1. Metal Enclosures: Type A316L Stainless Steel.

2.4 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

(A) Description: Comply with SCTE 77.

1. Color of Frame and Cover: Gray in hardscaped areas and Green in landscaped areas.
2. Configuration: Units shall be designed for flush burial and have open bottom, unless otherwise indicated.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.

5. Cover Legend: Molded lettering, as indicated for each service.
6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.
7. Handholes 12 inches wide by 24 inches long and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.

(B) Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel or fiberglass or a combination of the two.

1. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

- a. Armorcast Products Company.
- b. Carson Industries LLC.
- c. CDR Systems Corporation.
- d. NewBasis.
- e. Or an approved equivalent.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

(A) Outdoors: Apply raceway products as specified below, unless otherwise indicated:

1. Exposed Conduit: Rigid steel conduit.
2. Concealed Conduit, Aboveground: Rigid steel conduit.
3. Underground Conduit: Rigid steel conduit, direct buried.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
5. Boxes and Enclosures, Aboveground: NEMA 250, Type 4X.

(B) Minimum Raceway Size: 3/4-inch trade size.

(C) Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.

3.2 INSTALLATION

- (A) Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- (B) Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- (C) Complete raceway installation before starting conductor installation.
- (D) Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- (E) Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.
- (F) Conceal conduit, unless otherwise indicated.
- (G) Raceways Embedded in Slabs:
 - 1. Run conduit larger than 1-inch trade size, parallel or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support.
- (H) Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- (I) Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- (J) Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
- (K) Raceways for Optical Fiber and Communications Cable: Install raceways, metallic and nonmetallic, rigid and flexible, as follows:
 - 1. 3/4-Inch Trade Size and Smaller: Install raceways in maximum lengths of 50 feet.
 - 2. 1-Inch Trade Size and Larger: Install raceways in maximum lengths of 75 feet.
 - 3. Install with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings

show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.

- (L) Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
 - 1. Where required by New York City Electrical Code.
- (M) Flexible Conduit Connections: Use maximum of 72 inches of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
 - 1. Use LFMC in damp or wet locations subject to severe physical damage.
 - 2. Use LFMC in damp or wet locations not subject to severe physical damage.
- (N) Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall.
- (O) Set metal floor boxes level and flush with finished floor surface with weatherproof cover.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

- (A) Direct-Buried Conduit:
 - 1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom for pipe less than 6 inches in nominal diameter.
 - 2. Install backfill.
 - 3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction. Direct-Buried conduits are buried at a depth of 30-inch minimum and concrete encased under roadway.

4. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.
 - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete.
 - b. For stub-ups at equipment mounted on outdoor concrete bases, extend steel conduit horizontally a minimum of 60 inches from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.
5. Warning Planks: Bury warning planks approximately 12 inches above direct-buried conduits, placing them 24 inches o.c. Align planks along the width and along the centerline of conduit.

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

- (A) Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.
- (B) Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
- (C) Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.
- (D) Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables, but short enough to preserve adequate working clearances in the enclosure.
- (E) Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

3.5 PROTECTION

- (A) Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
2. Repair damage to paint finishes with matching touchup coating recommended by manufacturer.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- (A) The quantity of Metal Conduit and Tubing to be paid for under items E 260533 AA, E 260533 AB, E 260533 AC, and E 260533 AD shall be the actual number of linear feet of Metal Conduit and Tubing, installed to complete the work, to the satisfaction of the Engineer.
- (B) The quantity of Metal Wireways to be paid for under item E 260533 B shall be the actual number of linear feet of Metal Wireways, installed to complete the work, to the satisfaction of the Engineer.
- (C) The quantity of Boxes, Enclosures, and Cabinets to be paid for under ITEMS E 260533 CA, E 260533 CB and E 260533 CC shall be the actual number of Boxes, Enclosures, and Cabinets, installed to complete the work, to the satisfaction of the Engineer.
- (D) The quantity of Handholes and Boxes for Exterior Underground Wiring to be paid for under ITEM E 260533 D shall be the actual number of Handholes or Boxes for Exterior Underground Wiring, installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- (A) The unit price bid per linear foot of Metal Conduit and Tubing, under ITEMS E 260533 AA, E 260533 AB, E 260533 AC and E 260533 AD, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing Metal Conduit and Tubing, and all associated connectors and splices, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- (B) The unit price bid per linear foot of Metal Wireways, under ITEM E 260533 B, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing Metal Wireways, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

- (C) The unit price bid per each Enclosure, under ITEMS E 260533 CA, E 260533 CB and E 260533 CC, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing concrete foundations and footings and Electrical Enclosure Bollards, as per Section E 260529, and furnishing and installing Enclosure, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- (D) The unit price bid per each Handholes and Boxes for Exterior Underground Wiring, under ITEM E 260533 D, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the Handholes and Boxes for Exterior Underground Wiring, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 260533 AA	METAL CONDUIT AND TUBING (3/4" GALVANIZED RIGID STEEL CONDUIT)	L.F.
E 260533 AB	METAL CONDUIT AND TUBING (1" GALVANIZED RIGID STEEL CONDUIT)	L.F.
E 260533 AC	METAL CONDUIT AND TUBING (2" GALVANIZED RIGID STEEL CONDUIT)	L.F.
E 260533 AD	METAL CONDUIT AND TUBING (4" GALVANIZED RIGID STEEL CONDUIT)	L.F.
E 260533 B	METAL WIREWAYS	L.F.
E 260533 CA	FREESTANDING PANELBOARD ENCLOSURE	EACH
E 260533 CB	FREESTANDING COMPANY SWITCH ENCLOSURE	EACH
E 260533 CC	QUAD RECEPTACLE BANK ENCLOSURE	EACH
E 260533 D	HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING	EACH

**SECTION E 260553
(NOT A BID ITEM)
IDENTIFICATION FOR ELECTRICAL SYSTEMS**

PART 1 - GENERAL

1.1 SUMMARY

(A) Section Includes:

1. Identification for raceways.
2. Identification of power and control cables.
3. Identification for conductors.
4. Underground-line warning tape.
5. Warning labels and signs.
6. Instruction signs.
7. Equipment identification labels.
8. Miscellaneous identification products.

1.2 SUBMITTALS

- (A) Product Data: For each electrical identification product indicated.
- (B) Samples: For each type of label and sign to illustrate size, colors, lettering style, mounting provisions, and graphic features of identification products.
- (C) Identification Schedule: An index of nomenclature of electrical equipment and system components used in identification signs and labels.

1.3 QUALITY ASSURANCE

- (A) Comply with ANSI A13.1 and IEEE C2.
- (B) Comply with New York City Electrical Code.
- (C) Comply with OSHA 29 CFR 1910.144 and OSHA 29 CFR 1910.145.
- (D) Comply with ANSI Z535.4 for safety signs and labels.
- (E) Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

1.4 COORDINATION

- (A) Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Contract Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and OSHA 29 CFR 1910.145. Use consistent designations throughout Project.
- (B) Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- (C) Coordinate installation of identifying devices with location of access panels and doors.
- (D) Install identifying devices before installing acoustical ceilings and similar concealment.

PART 2 - PRODUCTS

2.1 POWER RACEWAY IDENTIFICATION MATERIALS

- (A) Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.
- (B) Colors for Raceways Carrying Circuits at 600 V or Less:
 - Black letters on an orange field.
 - Legend: Indicate voltage and system or service type.
- (C) Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.
- (D) Snap-Around Labels for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.
- (E) Snap-Around, Color-Coding Bands for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

(F) Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.

(G) Write-On Tags: Polyester tag, 0.010 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.

2.2 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

(A) Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.

(B) Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

(C) Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.

(D) Write-On Tags: Polyester tag, 0.010 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.

1. Marker for Tags: Permanent, waterproof, black ink marker recommended by tag manufacturer.

(E) Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

2.3 CONDUCTOR IDENTIFICATION MATERIALS

(A) Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.

(B) Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

(C) Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit

diameter of raceway or cable it identifies and to stay in place by gripping action.

- (D) Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.
- (E) Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.
- (F) Write-On Tags: Polyester tag, 0.010 inch thick, with corrosion-resistant grommet and cable tie for attachment to conductor or cable.
 - 1. Marker for Tags: Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.4 FLOOR MARKING TAPE

- (A) 2-inch wide, 5-mil pressure-sensitive vinyl tape, with black and white stripes and clear vinyl overlay.

2.5 UNDERGROUND-LINE WARNING TAPE

(A) Tape:

- 1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical and communications utility lines.
- 2. Printing on tape shall be permanent and shall not be damaged by burial operations.
- 3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.

(B) Color and Printing:

- 1. Comply with ANSI Z535.1 through ANSI Z535.5.
- 2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE, .
- 3. Inscriptions for Orange-Colored Tapes: TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE, FIRE ALARM.

(C) Material:

1. Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core, bright-colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.
2. Overall Thickness: 5 mils.
3. Foil Core Thickness: 0.35 mil.
4. Weight: 28 lb/1000 S.F.
5. 3-Inch Tensile According to ASTM D 882: 70 lbf, and 4600 psi.

2.6 WARNING LABELS AND SIGNS

- (A) Comply with New York City Electrical Code and 29 CFR 1910.145.
- (B) Self-Adhesive Warning Labels: Factory-printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.
- (C) Baked-Enamel Warning Signs:
 1. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
 2. 1/4-inch grommets in corners for mounting.
 3. Nominal size, 7 by 10 inches.
- (D) Metal-Backed, Butyrate Warning Signs:
 1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch galvanized-steel backing; and with colors, legend, and size required for application.
 2. 1/4-inch grommets in corners for mounting.
 3. Nominal size, 10 by 14 inches.
- (E) Warning label and sign shall include, but are not limited to, the following legends:
 1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
 2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."

2.7 INSTRUCTION SIGNS

- (A) Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch thick for signs up to 20 square inches and 1/8 inch thick for larger sizes.
 - 1. Engraved legend with black letters on white face.
 - 2. Punched or drilled for mechanical fasteners.
 - 3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.
- (B) Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.
- (C) Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

2.8 EQUIPMENT IDENTIFICATION LABELS

- (A) Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch.
- (B) Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.
- (C) Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.
- (D) Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch.
- (E) Stenciled Legend: In nonfading, waterproof, black ink or paint. Minimum letter height shall be 1 inch.

2.9 CABLE TIES

- (A) General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, Type 6/6 nylon.
 - 1. Minimum Width: 3/16 inch.
 - 2. Tensile Strength at 73 deg F, According to ASTM D 638: 12,000 psi.
 - 3. Temperature Range: Minus 40 to plus 185 deg F.

4. Color: Black except where used for color-coding.
- (B) UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, Type 6/6 nylon.
1. Minimum Width: 3/16 inch.
 2. Tensile Strength at 73 deg F, According to ASTM D 638: 12,000 psi.
 3. Temperature Range: Minus 40 to plus 185 deg F.
 4. Color: Black.

2.10 MISCELLANEOUS IDENTIFICATION PRODUCTS

- (A) Paint: Select paint system applicable for surface material and location (exterior or interior).
- (B) Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 INSTALLATION

- (A) Verify identity of each item before installing identification products.
- (B) Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- (C) Apply identification devices to surfaces that require finish after completing finish work.
- (D) Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- (E) System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
- (F) Aluminum Wraparound Marker Labels and Metal Tags: Secure tight to surface of conductor or cable at a location with high visibility and accessibility.

- (G) Cable Ties: For attaching tags. Use general-purpose type, except as listed below:

Outdoors: UV-stabilized nylon.

- (H) Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16 inches overall.
- (I) Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application.

3.2 IDENTIFICATION SCHEDULE

- (A) Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 50 A, and 120 V to ground: Identify with self-adhesive vinyl tape applied in bands. Install labels at 30-foot maximum intervals.
- (B) Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.
1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded service feeder and branch-circuit conductors.
 - a. Color shall be factory applied or field applied for sizes larger than No. 8 AWG, if authorities having jurisdiction permit.
 - b. Colors for 208/120-V Circuits:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - c. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.
- (C) Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.

- (D) Conductors to Be Extended in the Future: Attach marker tape to conductors and list source.
- (E) Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.
1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
 2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
 3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.
- (F) Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.
Install underground-line warning tape for both direct-buried cables and cables in raceway.
- (G) Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by New York City Electrical Code and OSHA 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.
- (H) Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Self-adhesive warning labels.
1. Comply with OSHA 29 CFR 1910.145.
 2. Identify system voltage with black letters on an orange background.
 3. Apply to exterior of door, cover, or other access.
 4. For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:
 - a. Power transfer switches.
 - b. Controls with external control power connections.
- (I) Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.
- (J) Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-

inch high letters for emergency instructions at equipment used for power transfer.

- (K) Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.

1. Labeling Instructions:

- a. Indoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch-high label; where two lines of text are required, use labels 2 inches high.
- b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
- c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
- d. Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

2. Equipment to Be Labeled:

- a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be self-adhesive, engraved, laminated acrylic or melamine label.
- b. Enclosures and electrical cabinets.
- c. Access doors and panels for concealed electrical items.
- d. Enclosed switches.
- e. Enclosed circuit breakers.
- f. Enclosed controllers.
- g. Contactors.

PART 4 - MEASUREMENT AND PAYMENT

No separate payment will be made for work under this Section. The cost of all work under this Section shall be deemed to be included in the cost of other electrical work associated with this project.

**SECTION E 262726
WIRING DEVICES**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- (A) Drawings and general conditions of the Contract apply to this Section.

1.2 SUMMARY

- (A) This Section includes the following:

1. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Power pedestals.
3. Toggle switches.
4. Spring wound mechanical timers.

1.3 DEFINITIONS

- (A) GFCI: Ground-fault circuit interrupter.
- (B) Pigtail: Short lead used to connect a device to a branch-circuit conductor.

1.4 SUBMITTALS

- (A) Product Data: For each type of product indicated.
- (B) Shop Drawings: List of legends and description of materials and process used for premarking wall plates.
- (C) Field quality-control test reports.
- (D) Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

1.5 QUALITY ASSURANCE

- (A) Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single manufacturer. Insofar as they are available, obtain all

wiring devices and associated wall plates from a single manufacturer and one source.

- (B) Electrical Components, Devices, and Accessories: Listed and labeled as defined in the New York City Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- (C) Comply with the New York City Electrical Code.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- (A) Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:

1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper).
2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
3. Leviton Mfg. Company Inc. (Leviton).
4. Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).
5. Or an approved equivalent manufacturer.

2.2 GFCI RECEPTACLES

- (A) General Description: Straight blade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.

- (B) Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include the following:
 - a. Cooper; GF20.
 - b. Pass & Seymour; 2084.
 - c. Hubbell;
 - d. Leviton;
 - e. Or an approved equivalent.

2.3 POWER PEDESTALS

- (A) Outdoor power pedestals housing two duplex GFI receptacles: Comply with UL requirements.

1. Material: 14 ga. polished stainless steel.

2. Overall Length: 42 inches
3. Cover: Integral, top hinged cover, self-closing and can be locked whether in use or not.
4. Base: Open base with wire slot openings on each side. To be mounted on grade in unfinished locations.
5. Provide with ground conductor terminal.
6. Accessory Opening: 2 gang with removable device mounting plate.
7. Nema 250, complying with type 3R weather-resistant.
8. Locks for pedestals shall be as recommendation by the pedestal manufacturer. Locks for all pedestals shall be keyed alike. The Contractor shall furnish two keys for each lock.

2.4 TOGGLE SWITCHES

(A) Comply with NEMA WD 1, UL 20, and FS W-S-896.

(B) Switches, Single Pole, 120/277 V, 20 A:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include the following:
 - a. Cooper; AH1221
 - b. Hubbell; HBL1221
 - c. Leviton; 1221-2
 - d. Pass & Seymour; CSB20AC1
 - e. Or an approved equivalent.

2.5 SPRING WOUND MECHANICAL TIMER SWITCHES

(A) Comply with NEMA WD 1.

(B) Timer switches, single pole, single throw, 120V, 20A, 2 hour range, spiral time scale:

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include the following:
 - a. Intermatic; FF2H.
 - b. Cooper.
 - c. Hubbell.
 - d. Leviton.
 - e. Pass & Seymour.
 - f. Or an approved equivalent.

(C) Comply with UL 1598.

- (D) Utility vapor tight incandescent fixture with die-cast aluminum housing, heavy duty prismatic glass globe with cage guard, 60 watt lamp, listed for wet locations.
- (E) Comply with UL requirements.
- (F) Electric Heater suitable for RPZ vault freeze protection, 24 ga galvanized steel enclosure, corrosive resistant grey polyester powder paint coating, integral thermostat with temperature range of 40 deg F to 70 deg F, 120V.

2.6 PHOTOCONTROLS

- A. Provide photoelectric controls wired in parallel with the time switches and lighting contactor coil.

Photocells shall be standard EEI-NEMA twistlock type solid state, poly-voltage type to operate on line voltages from 110 volts to 277 volts, 60hz. Photocell sulfide type is not acceptable.

Provide EEI-NEMA - twistlock receptacle mounted in heavy duty 4"x4"x3" deep cast aluminum [with 3/4" pipe knockouts and external mounting ears] box for mounting of photocontrol.

2.6 WALL PLATES

- (A) Single and combination types to match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material: 0.05-inch - thick, anodized aluminum.

- (B) Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant, die-cast aluminum with lockable cover.

2.7 LOCKABLE COVER BOXES

- (A) Vertical mounting type for installation in RPZ vaults, in enclosure and all other locations other than on power pedestals unless otherwise noted.

1. Complete with gasket, mounting hardware, and GFCI receptacle insert.
2. Material: Diecast powder coated aluminum.
3. Lockable whether in use or not.

4. Locks for cover boxes shall be as recommendation by the box manufacturer. Locks for all boxes shall be keyed alike. The Contractor shall furnish one key for each lock.

- (B) Weatherproof Lockable Cover Boxes: Meets NEC 406.8(B) (1) for receptacles in wet locations, and NEMA 3R rating.

2.8 FINISHES

- (A) Color: Wiring device catalog numbers in Section Text do not designate device color.

1. Wiring Devices Connected to Normal Power System: As selected by the Engineer, unless otherwise indicated or required by the New York City Electrical Code or device listing.

PART 3 - EXECUTION

3.1 INSTALLATION

- (A) Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.

- (B) Coordination with Other Trades:

1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

- (C) Conductors:

1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.

3. The length of free conductors at outlets for devices shall meet provisions of the New York City Electrical Code, Article 300, without pigtails.
4. Existing Conductors:
 - a. Cut back and pigtail, or replace all damaged conductors.
 - b. Straighten conductors that remain and remove corrosion and foreign matter.
 - c. Pigtailing existing conductors is permitted provided the outlet box is large enough.

(D) Device Installation:

1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

(E) Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right.

(F) Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

(G) Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

- (H) Adjust locations of outlets and service poles as may be required.
- (I) Power Pedestals: Distance between grade and the bottom of the GFI receptacles shall be 12 inches minimum. Power pedestals shall be installed on a concrete base as per the Contract Drawings. Concrete shall comply with the requirements of the NYCDOT Standard Highway Specifications, **Section 3.05**, Class B-32, Type IIA, and the cost shall be deemed included under Item E 262726 B - Power Pedestal.
- (J) Lockable Cover Boxes: To be installed in accordance with the Contract Drawings and as per the manufactures recommendations.

3.2 FIELD QUALITY CONTROL

- (A) Perform tests and inspections and prepare test reports.
 - 1. Test Instruments: Use instruments that comply with UL 1436.
 - 2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.
- (B) Tests for Convenience Receptacles:
 - 1. Line Voltage: Acceptable range is 105 to 132 V.
 - 2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is not acceptable.
 - 3. Ground Impedance: Values of up to 2 ohms are acceptable.
 - 4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
 - 5. Using the test plug, verify that the device and its outlet box are securely mounted.
 - 6. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- (A) The quantity of GFCI Receptacles to be paid for under ITEM E 262726 A shall be the actual number of GFCI receptacles, installed to complete the work, to the satisfaction of the Engineer.

- (B) The quantity of Power Pedestals to be paid for under ITEM E 262726 B shall be the actual number of power pedestals installed to complete the work, to the satisfaction of the Engineer.
- (C) The quantity of Toggle Switches to be paid for under ITEM E 262726 C shall be the actual number of Toggle Switches, installed to complete the work, to the satisfaction of the Engineer.
- (D) The quantity of Spring Wound Mechanical Timers to be paid for under ITEM 262726 D shall be the actual number of Spring Wound Mechanical Timers, installed to complete the work, to the satisfaction of the Engineer.

4.2 PRICES TO COVER

- (A) The unit price bid per GFCI Receptacle, under ITEM E 262726 A, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the GFCI receptacle, associated hardware, back boxes, cover plates, cover boxes, testing, and coordination, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- (B) The unit price bid per Power Pedestal, under ITEM E 262726 B, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the power pedestal, associated hardware, concrete foundation, testing, and coordination, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- (C) The unit price bid per Toggle Switch, under ITEM E 262726 C, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the toggle switch, associated hardware, back boxes, cover plates, cover boxes, testing, and coordination, all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.
- (D) The unit price bid per Spring Wound Mechanical Timer Switch, under ITEM E 262726 D, shall cover the cost of furnishing all labor, materials, equipment, insurance, and incidentals to complete the work including, but not limited to, furnishing and placing the Spring Wound Mechanical Timer Switch, associated hardware, back boxes, cover plates, cover boxes, testing, and coordination, all in accordance with the Contract

Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
E 262726 A	GFCI RECEPTACLE (DUPLEX)	EACH
E 262726 B	POWER PEDESTAL	EACH
E 262726 C	TOGGLE SWITCH	EACH
E 262726 D	SPRING WOUND MECHANICAL TIMER SWITCH	EACH

**SECTION HW-900H
Allowance for City Work Acceleration**

Under this Section, the Contractor will be paid for City work deemed necessary by DDC's Assistant Commissioner of Construction to accelerate the City work items in the project, which may include premium time for working during non-scheduled work hours and use of additional equipment. The Contractor will also be paid for accelerated City work deemed necessary by DDC's Assistant Commissioner of Construction for temporary restoration of the streets and sidewalks and subsequent removal thereof for City work, if required, due to Special Unscheduled Event periods. Such accelerated City work shall be paid for under this item in accordance with the requirements of Article 26 in the Standard Construction Contract.

Payment made under this Fixed Sum item shall cover the cost of all labor, materials, plant, equipment, insurance, and incidentals necessary to accelerate the City work as ordered by DDC's Assistant Commissioner of Construction.

No guarantee is given that this allowance item will in fact be required in this contract. The estimated "fixed sum" amount shown in the Bid Schedule is included in the total bid solely to ensure a method of payment for any accelerated work performed by the Contractor, as directed by DDC's Assistant Commissioner of Construction.

Payment will be made under:

Item No.	Item	Pay Unit
HW-900H	ALLOWANCE FOR CITY WORK ACCELERATION	F.S.

SECTION NYCT - 7A
Membrane Waterproofing

1.0. GENERAL REQUIREMENTS

1.1. Scope of Work.

- a. The Contractor shall furnish all labor, materials, tools and equipment, and perform all operations necessary for Membrane Waterproofing Work as indicated on the Contract Drawings and as specified herein.

1.2. Description.

- a. Membrane Waterproofing, except as otherwise specified herein, shall consist of a membrane of minimum three layers of treated fiberglass fabric mopped with asphalt, applied to the structure as indicated on the Contract Drawings. Where required free drainage shall be provided by pipe drains, hollow tile, or broken stone.

1.3. Applicable Codes, Standards and Specifications.

- a. Department of the Army, Corps of Engineers Guide Specification for Military Construction UFGS-071200 /2006 - Built-up Bituminous Waterproofing.
- b. American Concrete Institute, ACI 515.1R-79 (Revised 1985) - A Guide to the Use of Waterproofing, Dampproofing, Protective, and Decorative Barrier Systems for Concrete.
- c. ASTM D1668: Standard Specification for Glass Fabrics (Woven and Treated) for Roofing and Waterproofing.
- e. ASTM D5035: Standard Test Methods for Breaking Force and Elongation of Textile Fabrics.
- f. ASTM D41: Standard Specification for Asphalt Primer Used in Roofing, Dampproofing and Waterproofing.
- g. ASTM D449: Standard Specification for Asphalt Used in Dampproofing and Waterproofing
- h. The N.R.C.A. Waterproofing Manual.
- i. ASTM D6506: Standard Specification for Asphalt Based Protection Board for Below-Grade Waterproofing.

1.4. Certification Of Compliance.

- a. The Contractor shall obtain certification of compliance with specification requirements prior to delivery and installation.

1.5. Competent Workmen.

- a. The Contractor will be required to demonstrate that he has the necessary skill and experience required to perform Work of this nature. Only competent persons, skilled in this kind of Work shall be employed to apply the asphaltic compound.

1.6. Safety Precautions.

- a. The Contractor shall control workmen exposure to asphalt fumes in the Work Site by adhering to the recommendations developed by the National Institute for Occupational Safety and Health (NIOSH) and outlined in the Publication "Criteria for a Recommended Standard: Occupational Exposure to Asphalt Fumes."

1.7. Schedule of Operations.

- a. The Contractor shall maintain the schedule of operations, at the work site and make it available for the inspection of the Engineer.

1.8. Applicable VOC Regulations.

- a. All Waterproofing materials including primer shall be in compliance with applicable Federal, State and Local VOC regulations.

1.9. Limitation.

- a. Waterproofing Membrane shall not be used where soil is contaminated with oil.

1.10. Manufacturer's Instructions.

- a. The Contractor shall maintain the copy of manufacturer's installation instructions for the inspection of the Engineer, prior to delivery of materials to the Site.

1.11. Definition of Ply.

- a. Except as otherwise specifically provided in Paragraph 3.1, the term "ply" as used in this section shall mean a layer of treated fiberglass fabric, both sides of which shall be coated with asphalt at the time of laying as specified herein.

1.12. Number of Plies.

- a. The number of plies of Membrane Waterproofing shall be as indicated on the Contract Drawings.

1.13. Submittals.

- a. The submittals required for the Engineer's/Designer's approval shall be as set forth in the Specifications and may also be indicated in the submittal table at the end of this section for the Contractor's convenience. Other items and/or submittals required to indicate conformance with the Contract Documents shall be available for Engineer's inspection.
- b. Submit shop drawing showing all waterproofing details for all roof, sidewall and sidewall penetrations, Hold Points as well as waterproofing details between existing and new structures for the Engineer's review, comments and approval.

2.0. MATERIALS.

2.1. General.

- a. Materials shall be delivered to the Site in the manufacturer's sealed containers, marked with the manufacturer's name and brand indicating the grade and quality of the materials.
- b. Materials showing evidence of damage, deterioration, or having been opened will be rejected.
- c. Rejected materials shall be removed from the Site before the application of Membrane Waterproofing is started.
- d. Materials shall be stored so that they will not be subject to physical damage, freezing, or contamination. These materials shall be protected from oils, greases, waxes and solvents.

2.2. Material Properties.

2.2.1. Fabric Requirements.

- a. The fabric to be used shall be a fiberglass asphalt treated fabric conforming to ASTM D1668, Type I which shall have been treated before being brought to the Site. The untreated fabric shall weigh not less than 1.4 ounces per square yard, which when treated shall weigh not less than 2.0 ounces per square yard. The thread count shall be between 20 and 24 per linear inch in each direction. The strength of the fabric shall not be less than 75 pounds in either direction by the Strip Method (ASTM D5035).

The material used in treating the fabric shall have the same general characteristics as that used in cementing the layers on the work. The melting point of the asphalt used for treating fabric shall be between 135 degrees and 170 degrees Fahrenheit.

2.2.2. Asphalt Primer Requirements

- a. The waterproofing system shall be used with a cold applied primer conforming to ASTM D41.

2.2.3. Asphalt Requirements.

- a. Asphalt for subway waterproofing shall consist of fluxed natural asphalt, or asphalt prepared by the careful steam distillation of asphaltic petroleum, or by the careful steam distillation and air-blowing of asphaltic petroleum conforming to ASTM D449. The samples of asphalt, the materials used in its preparation, and the documents related to the method of manufacture shall be maintained for the inspection of the Engineer. The asphalt (TYPE II) shall comply with the following requirements:

1. The softening point of fluxed natural asphalt shall be between 145 degrees and 170 degrees Fahrenheit, as determined by the Ring and Ball method. The softening point of steam distilled asphalt shall be between 125 degrees and 140 degrees Fahrenheit as determined by the Ring and Ball method. The softening point of steam-distilled and airblown asphalt shall be between 125 and 140 degrees Fahrenheit as determined by the Ring and Ball method.
2. The consistency of the asphalt shall be determined by the penetration, which shall be between 25 and 50 at 77 degrees Fahrenheit, and not less than 5 at 32 degrees Fahrenheit. Penetration shall be the depth of penetration in hundredths of a centimeter of a No. 2 cambric needle. At 77 degrees Fahrenheit, the needle shall be weighted to 100 grams and shall act for 5 seconds. At 32 degrees Fahrenheit the needle shall be weighted to 200 grams and shall act for one minute.
3. A briquette of the asphalt of cross-section of one square centimeter shall have ductility of not less than 10 centimeters at 77 degrees Fahrenheit, the material being elongated at the rate of 5 centimeters per minute. (Dow moulds).
4. The specific gravity of the asphalt shall be not less than 1.00 at 77 degrees Fahrenheit.
5. Asphalt shall not be less than 99 percent soluble in trichloroethylene. Fluxed natural asphalt shall be not less than ninety-five percent soluble in cold carbon disulphide. Steam-distilled asphalt shall be not less than 99 percent soluble in cold carbon disulphide. Steam-distilled and airblown asphalt shall be not less than 99 percent soluble in cold carbon disulphide.
6. When a fifty gram sample of the asphalt is heated for 5 hours at a temperature of 325 degrees Fahrenheit in a tin box approximately 2-3/16 inches in diameter it shall not lose over one percent by weight.
7. The penetration of the residue of the asphalt at 77 degrees Fahrenheit after heating as specified in the preceding paragraph shall be not less than 60 percent of the original penetration.
8. Temperature of asphalt at time of application shall be in accordance with the manufacturer's recommendations.

2.2.4. Protection Board.

Install a 1/8" protection course board meeting the requirements of ASTM D 6506 Type 2 over the membrane. The board shall be by W.R. Meadows, type PC-2, or approved equal, in accordance with the manufacturer's instructions. It shall be installed after the water test has been completed and the membrane is dry. The board shall be set in an approved adhesive sufficient to insure a firm support for the entire area. The boards shall be butted together and cut to fit all intersecting surfaces and protrusions. The joints shall be covered with Detail Strip by W.R. Meadows (or approved equal) or with roofer's glass reinforced tape embedded in hot asphalt.

2.2.5. Asphalt Mastic Waterproofing.

- a. Where indicated on the Contract Drawings, asphalt mastic of the quality specified in Paragraph 2.2.3 ASPHALT REQUIREMENTS shall be used.

3.0. CONSTRUCTION METHODS.

3.1. Pre-Installation Conference

- a. An onsite pre-installation conference shall be held prior to commencement of field operations to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work. Agenda for meeting shall include review of special details and flashing. All trades affected by or involved with this work shall be present at such meeting.

3.2 Preparation of Surface.

- a. The asphalt primer shall be applied to a clean and dry substrate and in no case shall it be applied until at least 7 days after concrete placement, or longer if so recommended by the manufacturer. Allow primer to dry before applying waterproofing.
- b. The primer and membrane shall be applied when the weather is dry and the temperature in the shade is above 40 degrees F (4 degrees C).
- c. The substrate shall be free of dirt, debris, dust, oil, grease, frost, water, curing compounds, laitance, bituminous products, friable matter, slurry, and loose, weak and unsound materials. In order to insure a suitable surface, one of the following blast cleaning methods shall be used:
 1. dry sandblasting
 2. wet sandblasting
 3. high-pressure water jetting

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- d. All projections shall be removed and all voids made smooth by applying a bed of mortar to the existing concrete.
- e. Bevels and fillets shall be provided where surfaces intersect.
- f. The prepared surfaces shall be witnessed by the Engineer as per Section 1J paragraph 2.6.3.5 describing Hold Points, before application of the waterproofing system.

3.3. Application.

3.3.1. Heating.

- a. The kettles in which the asphalt is heated on the Site shall be equipped with automatic thermostatic control capable of maintaining asphalt temperature. Provide an accurate and clearly readable thermometer on all kettles.
- b. Kettles shall not be closer than 25 feet to buildings or combustible materials. Provide minimum two 20 lb ABC all purpose extinguisher at each kettle.
- c. The asphalt shall be heated to the manufacturer's recommended Equiviscous Temperature (EVT) +/- 25 degrees F, but in no case shall asphalt be heated to a temperature of more than 350 degrees Fahrenheit. Asphalt heated above 350 degrees Fahrenheit shall not be used in the Work. In no case shall the temperature exceed the flashpoint of the asphalt. EVT and Flashpoint temperature of asphalt shall be conspicuously posted on kettle.
- d. The fuel for heating the asphalt shall be as nearly as practical non-smoke-producing. Depending upon local conditions, portable or non-portable heating containers may be used.

3.3.2. Membrane Waterproofing; How Laid.

- a. The membrane waterproofing shall not be laid unless concrete is cured for seven days. On smooth surfaces there shall be spread hot melted asphalt in a uniformly thick layer; on this layer of asphalt shall be laid a treated fiberglass fabric; this process shall be repeated until such number of layers as indicated on the Contract Drawings have been placed and a final coat of asphalt shall then be applied. Waterproofing shall not be applied if frothing or bubbling occurs when hot asphalt is applied to the surface. Flat asphalt must stick tightly to the surface.
- b. The fabric shall be rolled out into the asphalt while the asphalt is still hot, and pressed against the asphalt so as to insure the fabric being completely stuck over its entire surface and free from air pockets.
- c. To prevent cooling of the asphalt, only an area of the size to be determined by trial shall be mopped before rolling the fabric into place.

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- d. Asphaltic Waterproofing shall be laid over compatible Waterproofing type. If the Waterproofing types are not compatible, metal flashing shall be used to physically separate two incompatible types.
- e. Special care shall be taken to lay Waterproofing Membrane over vertical surface during warm weather. Concrete shall be placed as soon as possible. Waterproofing which has sagged or cracked due to water build-up shall be replaced. When the structural wall or slab is placed against Waterproofing, special efforts are needed to avoid honeycomb in the concrete.

3.3.3. Asphalt to Completely Cover Surface.

- a. Each layer of asphalt shall completely and entirely cover the surface on which it is spread without cracks or blowholes.

3.3.4. Joints.

- a. Membrane waterproofing shall be so laid that at any cross-section through the fabric there shall be at least the full number of plies required. In order to insure this result there shall be an overlap of at least two inches at the ends and edges of each strip of fabric. The joints shall be staggered between plies.
- b. All joints in membrane waterproofing not laid in a continuous operation shall be lapped so as to secure a full lap of at least one foot at the ends and edges.
- c. In joining membrane waterproofing to asphaltic waterproofing in place, the surfaces of the waterproofing in place shall be cleaned and heated before joining the new waterproofing to that previously laid.
- d. All joints and lapped waterproofing membranes with new or existing waterproofing shall be witnessed by the Engineer as per Section 1J paragraph 2.6.3.5 describing Hold Points.

3.3.5. Water Test

The waterproofed area or a minimum area of 400 square feet shall be water tested by ponding with a minimum depth of 2" of water for a period of 24 hours to check the integrity of the installation. The water test is to be conducted prior to the installation of the protection concrete. If leaks occur, the water must be drained completely, thoroughly dry and the membrane installation repaired and the test repeated.

3.3.6. Use of Asphalt Mastic.

- a. Asphalt mastic shall be, poured in place, for seals between existing and new waterproofing.

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3.3.7. Precautions After Laying Membrane Waterproofing.

- a. When concrete is laid against the membrane waterproofing material, care shall be taken not to break, tear or injure in any way the outer surface of the asphalt. The concrete shall be placed as soon as practicable after the membrane waterproofing is laid. No loads shall be placed upon exposed membrane waterproofing and no walking over or working upon exposed membrane waterproofing will be allowed.
- b. Where membrane waterproofing is applied to concrete of inverts, said waterproofing shall be protected with a one-inch thick mortar (or pea gravel aggregate concrete) layer, which shall be placed on top of the waterproofing within 24 hours after installation of waterproofing. The mortar layer shall not be placed until waterproofing has been inspected. Mortar protection shall be omitted if a structural slab is placed within 24 hours after installation of waterproofing.
- c. Waterproofing protection board shall be placed over membrane waterproofing. (exception: on vertical surfaces in blind side applications). Such protection shall be placed in accordance with manufacturer's recommended procedures. Particular attention is called to the Contractor that the intent is to protect the membrane waterproofing from damage during construction and therefore, the protection must be placed immediately upon completion of the of the - waterproofing work and prior to subsequent work that may result in damage thereto.
 1. Where the water test is not being performed, waterproofing protection board shall be pressed into the final application of asphalt while the asphalt is still hot, with edges of boards brought into moderate contact and joints staggered.
 2. Where the water test is to be performed, complete the water test and, if necessary, repair the membrane installation as per paragraph 3.2.5. Apply a fresh layer of asphalt per paragraph 3.2.2. Install waterproofing protection board as indicated in paragraph 3.2.7c1 above.
 3. Waterproofing protection shall be carefully and neatly fitted around pipes and projections and shall cover the entire surface of the waterproofing.
- d. A concrete protection course at least 3 inches thick shall be applied over top slab waterproofing. The top slab waterproofing shall be witnessed by the Engineer as per Section 1J paragraph 2.6.3.5 describing Hold Points before the concrete protection course is placed.

3.3.8. Rehabilitation of Waterproofing.

- a. Where protection concrete is removed from an existing structure, extreme care shall be taken to ensure that the existing membrane waterproofing is protected and portions that are disturbed or damaged shall be patched and repaired by the application of asphalt, fabric or any other materials deemed necessary to restore the membrane waterproofing and provide the surface necessary for proper lapping.

3.4. Hold Points

- a. In accordance with Specification Section 1J - Contractors Quality Program, paragraph 2.6.3.5 - Hold Points, shall apply. The Contractor shall review and obtain acceptance by the Engineer for all hold point items listed below prior to proceeding with waterproofing.

4.0. MEASUREMENT AND PAYMENT.

4.1. Payment For Membrane Waterproofing.

- a. Payment for three 3-ply Membrane Waterproofing will be made at the unit price bid in Item No. NYCT-7A.1 - MEMBRANE WATERPROOFING, which price shall include the cost of all incidental work, labor and materials.
- b. Measurement for Membrane Waterproofing will be made on the basis of area covered and the number of plies used with no account being taken of laps.
- c. At joints where membrane waterproofing having any number of plies is lapped over membrane waterproofing having a different number of plies, payment for membrane waterproofing over the area covered by the overlap will be made under the item for the membrane waterproofing having the greater number of plies, to which the lesser number of plies is joined. In no case will payment be made for the laps of membrane waterproofing.
- d. Payment for 6-ply Membrane Waterproofing ordered to be used when severe water conditions are encountered will be made at 200-percent of the price bid for Item No. NYCT-7A.1 - MEMBRANE WATERPROOFING.
- e. Mortar protection layer and protective concrete for membrane waterproofing in place, as required in Paragraph 3.2.7 - Precautions After Laying Membrane Waterproofing, will be paid for under Item No. NYCT-7A.1 - MEMBRANE WATERPROOFING, which unit price shall include the cost of all work, labor, materials, and insurance necessary therefore or incidental thereto.

NYC TRANSIT SPECIFICATIONS
SECTION NYCT - 7A, Membrane Waterproofing

4.2. Payment For Waterproofing Protection Board.

- a. Payment for Waterproofing Protection Board, complete, in place will be paid for at the unit price bid for Item No. NYCT-7A.2 - WATERPROOFING PROTECTION BOARD, which price shall include the cost of all incidental work, labor, material, and insurance.
- b. Measurement for Waterproofing Protection Board shall be made on the basis of area covered as indicated in the Contract Drawings with no account being taken for laps.

Payment will be made under:

Item No.	Item	Pay Unit
NYCT-7A.1	WATERPROOFING MEMBRANE	S.F.
NYCT-7A.2	WATERPROOFING PROTECTION BOARD	S.F.

TABLE 1

Item no	Paragraph	Hold points
1	3.3.4.d	Lapping of waterproofing membranes
2	3.2.f	Preparation of surfaces
3	3.7d	Before application of protection course

Submittal Approvals

Item No.	Paragraph No.	Submittal	Approval By (Engineer or Designer)
1	1.13.	Schedule of Hold Points	Engineer
2			
3			

Note:

This table does not include approvals for "or-equal" proposals. Approvals for "or-equal" proposals are covered in Information For Bidders, Paragraph 9 and Specification Section 1B, Paragraph 1.38.

NYC TRANSIT SPECIFICATIONS
SECTION NYCT - 7A, Membrane Waterproofing

SECTION PER-BP
REMOVING AND REINSTALLING EXISTING BRONZE PLAQUES

PER-BP.1. INTENT. Under this Item, the Contractor shall furnish all materials and labor, equipment, and facilities required to remove, store, and reinstall existing and bronze sidewalk plaques, in accordance with drawings, specifications, and directions of the Engineer. The work does not include provision of concrete for the work, which shall be covered under a separate item. The Contractor will be responsible for all removal, cleaning, repair, modification, and reinstallation of the plaques as necessary for complete installation.

PER-BP.2. MATERIALS.

- (A) **STEEL.** Stainless Steel: Shall be type 304.
- (B) **PAINT.** Metal Primer: Shall be of an approved type.
- (C) **SETTING BED MATERIAL.** Shall be a packaged, two-component, shrinkage-free, self-curing, high-strength, cement-based topping screed mortar suitable for horizontal exterior applications, with the following characteristics:
 - 1. Compressive Strength ASTM C 109 - Greater than 6,000 psi
 - 2. Flexural Strength ASTM C 348 - Greater than 1,500 psi
 - 3. Slant / shear bond strength ASTM C882 - Greater than 1,450 psi
 - 4. Volume change ASTM C 157 - +0.015%
 - 5. Freeze / thaw resistance ASTM C 666-A - 100%
 - 6. Resistance to de-icing salts ASTM C 672 - 0 rating, no scaling
 - 7. Permeability to chlorides ASTM C 1202 - 100 to 1000 coulombs
- (D) **SUBMITTALS.** Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.
 - 1. **Qualifications:** Submit list of completed projects; include project names, addresses, and names of Architects and Owners.
 - 2. **Product Data:** Submit product data for setting materials.
 - 3. **Documentation:** Prior to starting demolition/removal, submit photographic images of existing plaques as digital photographic files in jpeg format and 8.5"x11" prints. Concurrently submit key plan identifying individual plaques keyed to numbered 8.5" x 11" prints of photos, noting orientation, on base of project topographic survey at the scale of 1" = 10'.

PER-BP.3. METHOD OF CONSTRUCTION.

- (A) **Quality Control:** Engage firm(s) who have successfully completed the installation of bronze plaques in pavement surfaces.
- (B) **Construction Details.** Clean surface of existing plaques using water and mild detergent, and dry with paper towels. Using tripod directly over middle of plaque, digitally photograph entirety of each existing plaque before removal, 10mb minimum file size, in daylight without shadow. For each plaque, provide one additional oblique photograph documenting location and orientation.

Mask off top surface of existing metal plaques with heavy-duty duct tape and 1/4" plywood. Sawcut and carefully break up concrete sidewalk surrounding existing plaques using small jackhammer and hand tools. Keep power equipment at safe distance from plaque edge. Remove plaque and carefully detach concrete and setting material from bottom surface, being careful not to damage anchors which may protrude from bottom. Clean concrete from bottom surface with powered wire brush. Reattach or replace anchor bolts with stainless steel bolts of matching size. Where receiving threads are broken or irreparable, carefully tap thickened portion of bottom of plaque to receive additional anchor(s) such that there is at least one anchor located in each quadrant of the plaque.

Plaque shall be reinstalled in precise original location, alignment and orientation.

After concrete base slab has been poured and cured, drill and install stainless steel anchor dowels in base slab extending minimum 1.5" above and below the base slab surface, and set with non-shrink epoxy grout. Form raised setting bed to precise elevation and slope necessary to set surface of plaque flush with asphalt block pavers, at exact footprint size of plaque.

Verify that concrete surface is completely clean. Following manufacturer instructions, apply a slurry bond coat of the topping cement before installing the topping cement. Install topping cement and screed to required elevation. Immediately apply a slurry bond coat to the surface of the cement and set plaque while supporting the plaque at required elevation and slope. Gently tap surface of plaque with wooden mallet to insure adherence.

Allow cement cure per manufacturer instructions before installing pavers around the plaque. Protect plaque surface with duct tape and plywood through remainder of construction period as necessary. Remove protection and clean with mild cleaning compounds that contain no caustic or hard filler or

abrasives to completely remove residue of duct tape.

- (C) **Protection:** The Contractor shall protect the work and keep it in first class condition until the completion of his operation at the site. Any work which is damaged at any time previous to the final acceptance of the work shall be removed and replaced at the Contractor's expense, including provision of replacement granite.

PER-BP.4. MEASUREMENT. The quantity measured for payment shall be the number of Existing Bronze Plaques actually reinstalled, to the satisfaction of the Engineer.

PER-BP.5. PRICE TO COVER. The unit price bid per EACH Existing Bronze Plaques, Removed and Reinstalled, shall cover the cost of all labor, materials, equipment, insurance, and incidental required including, but not limited to, photography, preparation of submittals, removal, storage and transporting plaque, and preparing and installing plaque; all as specified on Contract Drawings, the specifications and directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PER-BP	REMOVING AND REINSTALLING EXISTING BRONZE PLAQUES	EACH

**SECTION PER-DW
PLANTER DRAINAGE/WATER RETENTION SYSTEM**

PER-DW.1. DESCRIPTION. This work shall consist of furnishing and installation of subsurface drainage/water-retention system including related work in accordance with the specifications and at locations identified on the Contract Drawings or designated by the Engineer. The work shall include all necessary materials, labor, supervision and equipment for installation of a complete subsurface drainage system.

PER-DW.2. MATERIALS. The System shall be of a type engineered for roof garden installation, and shall include 1.2" to 1.5" thick three-dimensional molded polyethylene panels with water retention reservoirs on the top side and drainage channels on the bottom, lightweight porous aggregate to fill the reservoirs, and a non-woven polymeric geotextile fabric.

(A) The components shall be Gardendrain GR30 panels, LiteTop aggregate, and Systemfilter geotextile, all as manufactured by American Hydrotech Chicago, IL 60611 (800) 877-6125, or approved equivalent type as manufactured by Zinco USA Inc., Stoughton MA 02072 (866) 766-3155, or Xero Flor America LLC, Durham NC 27704 (919) 683-1073; or approved equivalent.

(B) **SUBMITTALS.** Submit manufacturer's product data sheets and product samples for each component of the system.

PER-DW.3. METHODS. Installer shall be experienced in the installation of roof garden systems including all the components and products to be utilized.

Comply with all manufacturer recommendations per installation instructions, data sheets and packaging. Deliver materials to job site in manufacturer's undamaged packaging and complete with installation instructions. Store off ground, under cover, protected from ultra-violet radiation, weather and construction activities.

Before beginning installation, Contractor shall inspect and approve of subsurface waterproofing, root barrier, and protection layers. Prior to installation, ensure waterproofing and root protection has been properly installed and flood tested. When requested by the Engineer, provide manufacturer representative to review work performed.

Molded panels shall be installed with holes through the dimples on top, over the protection layer. Adjacent panels shall be overlapped approximately 1 inch. The panels shall be cut to fit around penetrations, etc. with a heavy-duty utility knife or small toothed saw. The reservoir cups of the panels shall be filled with lightweight aggregate level with the top surface of the panels. The

geotextile layer shall be laid over the aggregate-filled panels, lapping adjacent rolls a minimum of 6 inches. Enough geotextile material shall be left to be drawn up on the interior sides of the planter and completely and securely adhered with suitable adhesive construction tape, 1" below the soil level of the planter. The system shall be protected from damage before and during installation of soil medium and plantings.

PER-DW.5. Measurement. The quantity to be measured for Payment shall be the number of square feet of Planter Drainage/Water Retention System furnished and installed in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

PER-DW.6. Price to Cover. The contract price per square foot shall include the cost of all materials, equipment and labor necessary to complete the work as required in a manner approved by the Engineer, in accordance with the plans, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PER-DW	PLANTER DRAINAGE/WATER-RETENTION SYSTEM	S.F.

SECTION PK-13
TYPE "K" COPPER TUBING

PK-13.1. DESCRIPTION. Under this section the Contractor shall furnish, install and connect the water pipe of the size shown in accordance with the Contract Drawings, the specifications and directions of the Engineer.

PK-13.2. MATERIALS AND METHODS.

PIPE: The water service pipe shall be rigid hard temper type "k" copper tubing in straight lengths meeting the specification for ASTM designation No. B 88.

FITTINGS: Fittings shall be approved wrought copper and bronze solder - joint pressure fittings (ANSI B 16.22), Di-Electric fittings as required.

JOINTS: Joints shall be made by soldering, using 95-5 tin antimony solder. From the curb valve to the water tap, joints shall be of the "flared" type.

INSTALLATION: The pipe shall be laid true to line and grade with a cover as indicated on the plans or as directed by the Engineer. When the foundation is good firm earth, the earth should be pared or molded to give a full support and if necessary a layer of fine sand or other suitable material should be placed. The same means of securing firm foundation should be adopted in case the excavation has been made deeper than necessary, in which case the Contractor shall furnish the gravel at his own expense.

Where the bottom of the trench is in rock, fresh fill, soil of low bearing power or other situations where special foundations are required, the Contractor shall provide such foundation in accordance with the written order of the Engineer. The work shall be paid for at the unit prices bid for the materials used in the work.

TESTS: The Contractor shall not backfill over any pipe until ordered by the Engineer. The pipe system shall be tight and show no leaks when filled with water, sealed and subjected to an internal hydrostatic pressure of 100 psi for thirty minutes. Temporary caps shall be placed where required to permit making the tests where valves are not available. The tests shall be made in the presence of the Engineer or his representative.

PK-13.3. MEASUREMENT. The quantity of TYPE K COPPER TUBING to be paid for under these items shall be the number of linear feet (laying length) of each size tubing incorporated in the work to the satisfaction of the Engineer, measured along the centerline of the tubing.

PK-13.4. PRICES TO COVER. The unit price bid for each size TYPE K COPPER TUBING shall include the cost of all labor, materials,

equipment, insurance, and incidental expenses necessary to complete the work including, but not limited to, excavation and backfilling to grade, furnishing and installing tubing, fittings and fine gravel; all in accordance with the plans, the specifications, and the directions of the Engineer.

Water taps will be paid for under other items.

Payment will be made under:

Item No.	Item	Pay Unit
PK-13A	TYPE K COPPER TUBING, 1/2" DIAMETER	L.F.
PK-13B	TYPE K COPPER TUBING, 3/4" DIAMETER	L.F.
PK-13D	TYPE K COPPER TUBING, 1" DIAMETER	L.F.
PK-13E	TYPE K COPPER TUBING, 1-1/2" DIAMETER	L.F.
PK-13F	TYPE K COPPER TUBING, 2" DIAMETER	L.F.

SECTION PK-17
CAST IRON VALVE BOX, 5-1/4" DIAMETER

PK-17.1. DESCRIPTION. Under this Section the Contractor shall furnish and install CAST IRON VALVE BOX, 5-1/4" DIAMETER in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

PK-17.2. MATERIALS.

Box: 5 1/4" diameter valve boxes shall be Bingham & Taylor Fig. No. 4908 with a Fig No. 4904-L locking cover, or approved type manufactured by Star Pipe Products, Houston, TX; Tyler Utilities Division, Tyler, TX; or approved equivalent. The cover shall have the designation "WATER" cast thereon. The boxes shall extend within the limits called for on the plans.

Setting: The valve boxes shall be set plumb, as shown on the plans, on a footing of brick laid in cement mortar, supported on a foundation of broken stone.

Brick: The brick shall be made from clay or shale, well burned, of a quality approved by the Engineer. The mortar shall be composed of one part Portland Cement and two parts sand.

Broken Stone: The broken stone shall be clean broken traprock, or other approved stone, all of which shall pass a one-inch square opening screen and retained on a 5/8 inch square opening screen.

PK-17.3. SHOP DRAWINGS. The Contractor shall submit Shop Drawings when required, in accordance with the requirements of the NYC DOT Standard Highway Specifications under Division 1 Contract Requirements **Section 1.06.13**. The Contractor shall submit Shop Drawings when required, for Engineer's approval.

PK-17.4. MEASUREMENT. The quantity of CAST IRON VALVE BOXES, 5-1/4" DIAMETER, to be paid for under this item shall be the number of boxes satisfactorily installed.

PK-17.5. PRICE TO COVER. The price bid shall be a unit price per EACH Cast Iron Valve Box and shall include the cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, excavation and restoration, and furnishing and placing brick and broken stone setting bed; all in accordance with the plans, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-17	CAST IRON VALVE BOX, 5-1/4" DIAMETER	EACH

SECTION PK-184-GH1
GROUND HYDRANT - 1" DIAMETER

PK-184-GH1.1. INTENT: The Contractor shall furnish and install a ground hydrant, all piping, fittings, and other sundries necessary to connect the water lines, as shown on the Contract Drawings, the specifications and directions of the Engineer.

PK-184-GH1.2. DESCRIPTION: Under this Section the Contractor shall furnish and install a GROUND HYDRANT - 1" DIA., including, but not limited to, all plumbing work and connection to water service; all in accordance with the Contract Drawings, the specifications, and directions of the Engineer.

PK-184-GH1.3. MATERIALS: Unless otherwise specified herein, all materials and methods of construction shall conform to NYCDOT Standard Highway Specifications.

- (A) Equipment: One inch (1") Ground Hydrant shall be Type Z-1360-HD-RK-NB-10 manufactured by Zurn Industries Inc., Hydromechanics Division, Erie, PA or approved equivalent model manufactured by:
- 1) MIFAB, Inc. Chicago, IL
 - 2) Jay R. Smith Manufacturing Co., Montgomery, AL
 - 3) or approved equivalent.

Hose connection shall be one inch (1") diameter.

- (B) Hydrant shall be an encased, ground hydrant for flush-with-grade installation, complete with bronze casing, polished nickel bronze box, all bronze interior parts, bronze seat and replaceable seat washer, non-turning operating rod with free-floating compression closure valve with 1" connection. Polished nickel-bronze box shall have a scoriated heavy-duty cover with operating key lock and the word "Water" cast on cover. Depth of bury is two (2) feet minimum. Four (4) keys are to be supplied to the Engineer.
- (C) Brass Garden Hose Adaptor (for one inch Ground Hydrant only): Shall be (1" => 3/4") Model # FM1076 as manufactured by George Taylor Brass and Bronze Works, Huntington, N.Y., or approved equivalent model as manufactured by Jay R. Smith Manufacturing Co., Montgomery AL or Zurn Industries Inc., Hydromechanics Division, Erie, PA; or other approved manufacturer.
- (D) Concrete Collar: Class A-40 concrete in accordance with **Section 4.06** of NYCDOT Standard Highway Specifications.
- (E) Broken Stone: Broken Stone shall consist solely of crushed ledge rock. Stone shall be as designated on the detail and shall be of the approved size and quality specified in NYCDOT Standard Highway Specifications, Division II Basic Materials of

Construction, **Section 2.02**- Aggregate-Coarse (Broken Stone and Gravel).

- (F) Geotextile Filter Fabric: Geotextiles used in drainage applications shall be Class 2 and shall conform to the following AASHTO-M288 properties for drainage geotextiles:

	ASTM Test	TYPE	TYPE
Structure		Woven (Class 2)	Non-Woven (Class 2)
Percent Elongation	ASTM D4595	<50%	≥50%
Grab Strength (Min.)	ASTM D4632	247 lbf	157 lbf
Tear Strength (Min.)	ASTM D4533	90 lbf	56 lbf
Puncture Strength (Min.)	ASTM D4833	90 lbf	56 lbf
Permittivity (Min.)	ASTM D4491	0.21 / sec.	
Apparent Opening Size/Sieve Designation (Max.)	ASTM D4751	0.0098 inch/ Std. No. 60 sieve	

a. Manufacturers:

- 1) Advanced Drainage Systems, Inc., Hillard, OH.
- 2) Carthage Mills, Cincinnati, OH.
- 3) Mirafi, Inc., Charlotte, NC.
- 4) or approved equivalent.

PK-184-GH1.4. SUBMITTALS. Follow the procedures in the General Conditions of **Section 1.06.31** of the NYCDOT Standard Highway Specifications.

- (A) Catalog Cuts: The Contractor shall submit Catalog Cuts of the ground hydrant for approval prior to installation.
- (B) Shop Drawings: The Contractor shall submit shop drawings when required by the Engineer, in accordance with the requirements of **Subsection 1.06.13** of the NYCDOT Standard Highway Specifications.
- (C) Operating Keys: The Contractor shall furnish four (4) operating keys for each hydrant type/size installed under this item.
- (D) Parts Repair Kit: Contractor shall supply one (1) Parts Repair Kit for each Ground Hydrant type/size installed under this item.

PK-184-GH1.5. MEASUREMENT: The quantity to be measured for payment shall be the actual number of EACH Ground Hydrant, of the size specified, actually installed, complete with all plumbing work, to the satisfaction of the Engineer.

PK-184-GH1.6. PRICE TO COVER: The price bid shall be a unit price for each Ground Hydrant of the size specified and shall include the

cost of all labor, materials, equipment, insurance, and incidentals necessary to complete the work including, but not limited to, all plumbing work and connections to water service within five (5') feet of the ground hydrant, furnishing and installing broken stone, geotextile, PVC pipe, concrete collar, hose adapter, and all submittals; all in accordance with the Contract Drawings, the specifications, and the directions of the Engineer.

Payment will be made under:

Item No.	Item	Pay Unit
PK-184- GH1	GROUND HYDRANT - 1" DIAMETER	EACH

SECTION T-60000B

Cable spec. for 120 volt power supply

Cable Name

This cable shall be called 2c-10 B (breakdown 2c-10 B= 2 number 10awg conductors with a third wire for grounding.)

Intended use

This cable is to be used for 120 volt power systems in NYC.

The cable shall be rated for 600 Volts and have a polyethylene –insulated, jacketed cable for use in under ground conduit or for aerial use(must have strain relief's built in for aerial use without a messenger cable). The outer jacket shall be a black in color and be UV resistant and made to endure extreme outdoor usage unprotected without deterioration of insulation or outer jacket fading. This cable shall be rated for direct burial with out conduit covering or other protection.

Construction

The conductors shall be round annealed copper conforming to ASTM designation b-3.

This cable shall be a 3 conductor type with two number ten AWG wire size conductors one white solid wire and one black solid wire with the third conductor number 8 AWG bare stranded wire.

Insulation

The insulation shall be a heat-stabilized polyethylene conforming to the requirements of ASTM designation D 1248 for type 1 category 5 grade E4 materials .this insulation shall be concentrically applied about the conductor. This installation shall meet the following requirements when tested in accordance with the procedures of ASTM designation D 2633 and D 1351.

This cable shall meet all other requirements as listed in the NYC DOT traffic specifications 3/95.

Payment will be made under:

Item No.	Item	Pay Unit
T-60000B	FURNISH 2 c #10B (BREAKDOWN=2#10 WITH 3 RD WIRE FOR GROUNDING)	L.F.

4. SPECIAL PROVISIONS

The following shall become a part of and apply to the Contract:

A. LINES AND GRADES. The Contractor shall furnish lines and grades in accordance with Section 1.06.27 of the Standard Highway Specifications, except that survey controls established for this project may no longer exist and the Contractor shall be required to re-establish the survey control information using official Borough Survey Control Monuments and Bench Marks, where they exist. The Contractor shall check with Topographic Section of the Borough President's Office as to the reliability and accuracy of the data to be used for lines and grades.

B. SPECIFIC TRAFFIC STIPULATIONS. Under this contract, the Contractor shall perform the work in strict accordance with the requirements of Section 6.70 in the Standard Highway Specifications, specific traffic stipulations as called for on the plans, OCMC Traffic Stipulations attached to the end of these Special Provisions, and the directions of the Engineer. In case of a conflict, the Engineer's decision shall be final.

In addition, the cost of compliance with requirements of the OCMC Traffic Stipulations, unless otherwise provided for, shall be deemed included in the prices bid for all scheduled items.

C. HOLIDAY CONSTRUCTION EMBARGO. A special Holiday Construction Embargo shall be in effect on the Friday of the week preceding Thanksgiving Day week from 6:00 AM to 11:59 PM and again from the Monday of Thanksgiving Day week from 6:00 AM through January 2, at 11:59 PM. Roadway and sidewalk construction activities will be restricted during the embargo period on the streets listed below*.

Any permits issued prior to the date of this notice, for work during this embargo period on the streets listed below which do not already have the permit stipulation "410" are hereby suspended for the period noted above. All permittees must comply with this embargo unless a special waiver is granted by OCMC. Waiver requests must be filed at least thirteen days before Thanksgiving Day, in the Permit Office by filing a "Request for Roadway/Sidewalk Permits During Embargo Periods" and submitting supporting documentation. Waiver requests should only be submitted for critical reasons for a specific project. If a waiver is granted, the applicant will be

* 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>

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.

D. SUMMER CONSTRUCTION EMBARGO FOR PHASE I WORK. There shall be a Summer Construction Embargo which shall be in effect for a portion of the Phase I Work area in front of 120 Park Avenue as detailed on the contract drawings starting at the end of the Thursday prior to Memorial Day and ending the day after Labor Day so as to allow the unhindered operation of the outdoor café concession. Should this Summer Construction Embargo actually be implemented due to the Contractor's work operations, a special waiver will be granted by OCMC from the above "Holiday Construction Embargo" requirements for this Phase I area.

Prior to this summer embargo period, the Contractor shall be required to complete the temporary restoration and demobilization of all work within the aforementioned portion of the Phase I area. All necessary measures shall be taken so that the roadways and sidewalks are in proper condition to allow for the expeditious and safe movement of vehicular, bicycle and pedestrian traffic, and all construction equipment and materials completely removed from within the aforementioned portion of the Phase I area. In addition, the Contractor shall be required to install fencing adjacent to the café concession in accordance with the bid items 6.28 ME, 6.34 ACTP and 9.06 HW as ordered by the Engineer.

Temporary restoration of the streets and sidewalks and removal thereof, if required for the Summer Construction 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.

E. DISPOSAL OF EXCESS EXCAVATED MATERIAL. All excess excavated material, with the exception of contaminated material, shall become the property of the Contractor and shall be properly disposed of away from the site, at the Contractor's expense. Contaminated material shall be disposed of separately in accordance with contract requirements.

F. CONTRACT ITEMS THAT INCLUDE BACKFILL AS A PART OF THEIR WORK. The following shall pertain to all contract items that have backfill as a part of their work: Backfilling shall comply with Subsection 4.11.3 of the Standard Highway Specifications and no additional payment will be made for any Highway or Street Lighting work item requiring Contractor to furnish additional fill material to meet these requirements when backfilling.

G. N.Y.C. TRANSIT INSURANCE. The Contractor (Permittee) shall indemnify and save harmless the City of New York and the New York City Transit (Permitter) in accordance with the following "Insurance Requirements" and proof that the necessary insurance is in effect will be required before work can commence:

NYCT "OUTSIDE CONTRACT" INSURANCE REQUIREMENTS

1. The Permittee at its sole cost and expense shall carry or cause to be carried and shall maintain at all times during the period of performance under this Agreement policies of insurance as herein below set forth below:
 - (A) Workers' Compensation Insurance (including Employer's Liability Insurance) with limits as specified in Schedule A, which limit may be met by a combination of primary and excess insurance meeting the statutory limits of New York State. The policy shall be endorsed to include Longshoreman's and Harbor Workers' Compensation Act/Maritime Coverage Endorsement and/or Jones Act Endorsement when applicable.
 - (B) Commercial General Liability Insurance (I.S.O. 2001 Form or equivalent) approved by Permitter in the Permittee's name with limits of liability as specified in Schedule A for each occurrence on a combined single limit basis for injuries to persons (including death) and damages to property. The limits may be provided in the form of a primary policy or combination of primary and umbrella/excess policy. When the minimum contract amounts can only be met when applying the

umbrella/excess policy; the Umbrella/Excess Policy must follow form of the underlying policy and be extended to "drop down" to become primary in the event primary limits are reduced or aggregate limits are exhausted. Such insurance shall be primary and non-contributory to any other valid and collectable insurance and must be exhausted before implicating any Permittor/MTA policy available.

Such policy should be written on an occurrence form; and shall include:

- Contractual coverage for liability assumed by the Permittee under this agreement;
- Personal and Advertising Injury Coverage;
- Products-Completed. Operations;
- Independent Contractors Coverage;
- "XCU" coverage (Explosion, Collapse, and Underground Hazards) where necessary;
- Contractual Liability Exclusion, applicable to construction or demolition operations to be performed within 50 feet of railroad tracks, must be voided, where necessary; and,
- Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent) approved the Permittor naming:

New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA), the Staten Island Rapid Transit Operating Authority (SLRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner).

- (C) Business Automobile Liability Insurance Policy - (I.S.O. Form CA 00 01 10 01 or equivalent) approved by the Permittor is required if Permittee's vehicle enters Permittor property. The insurance must be in the name of the Permittee or its contractor entering the Permittor property with limits of liability in the amount specified in Schedule "A" for claims for bodily injuries (including death) to persons and for damage to property arising out of the ownership, maintenance or use of any owned, hired or non-owned motor vehicle.
- (D) Railroad Protective Liability Insurance policy shall be required as specified in Schedule A.

(E) Environmental/Pollution Exposures

In the event environmental or pollution exposures exist, the Permittee shall require the environmental contractor or sub-contractor to provide the applicable insurance covering such exposure. The limits and type of insurance provided shall be satisfactory to the Permitter and will be confirmed to the parties prior to the start of the work.

2. General Requirements Applicable to Insurance Policies

- a) All of the insurance required by this Article shall be with Companies licensed or authorized to do business in the State of New York with an A.M. Best Company rating of not less than A-/VII or better and reasonably approved by the Permitter/MTA and shall deliver evidence of such policies.
- b) Except for Workers Compensation, all references to forms and coverages referred to above shall be the most recent used by the Insurance Services Office, Inc. (ISO") or equivalent forms approved by the Insurance Department of the State of New York, provided, however, that excess coverages may be written on forms reasonably acceptable to Permitter containing provisions other than those contained in ISO forms but otherwise conforming in substance to the requirements of this Article.
- c) The Permittee or its Contractor performing the work shall furnish evidence of all policies before any work is started to the Permitter:

For NYCT Contract Inspection
C/O Mr. John Malvasio
Director, MOW Engineering
130 Livingston Street, Room 8044F
Brooklyn, NY 11201
Telephone: (718) 694-1358

These policies must: (i) be written in accordance with the requirements of the paragraphs above, as applicable; (ii) be endorsed in form acceptable to include a provision that the policy will not be canceled, materially changed, or not renewed, unless otherwise indicated herein, at least thirty (30) days prior written notice to the Permitter c/o MTA Risk and Insurance Management (MTA RIM) Department - Standards, Enforcement & Claims Unit, 2 Broadway - 21st floor, New York, NY 10004; and (iii) state or be endorsed to provide that the coverage afforded under the contractor's policies shall apply on a primary and not on an excess or contributing basis with any policies which may be available to the Permitter/MTA, and also that the contractor's policies, primary and excess, must be exhausted before

implicating any Permitter/MTA policy available. (iv) In addition, contractor's policies shall state or be endorsed to provide that, if a subcontractor's policy contains any provision that may adversely affect whether contractor's policies are primary and must be exhausted before implicating any Permitter/MTA policy available, contractor's and subcontractor's policies shall nevertheless be primary and must be exhausted before implicating any Permitter/MTA policy available. Except for Professional Liability, policies written on claims made basis are not acceptable. At least two (2) weeks prior to the expiration of the policies, contractor shall endeavor to provide evidence of renewal or replacement policies of insurance, with terms and limits no less favorable than the expiring policies. Except as otherwise indicated in the detailed coverage paragraphs below, self insured retentions and policy deductibles shall not exceed \$100,000, unless such increased deductible or retention is approved by Permitter/MTA. The Permittee shall be responsible for all claim expense and loss payments within the deductible or self-insured retention. The insurance monetary limits required herein may be met through the combined use of the insured's primary and umbrella/excess policies.

- d) Certificates of Insurance may be supplied as evidence of policies of the above policies, except for Policy (D) Railroad Protective Liability Insurance Policy. However, if requested by the Permitter, the Permittee shall deliver to the Authority, within forty-five (45) days of request, a copy of such policies, certified by the insurance carrier as being true and complete. The Railroad Protective Liability Insurance Policy must be provided in the form of the Original Policy. A detailed Insurance Binder may be provided, ACORD or Manuscript Form, pending issuance of the Original Policy. The Original Policy must be submitted to MTA RIM within 30 days of the Binder Approval.
- e) If a Certificate of Insurance is submitted, it must: (1) be provided on the Permitter Certificate of Insurance Form or MTA Certificate of Insurance Form for Joint Agency Agreements; (2) be signed by an authorized representative of the insurance carrier or producer and notarized; (3) disclose any deductible, self-insured retention, sub-limit, aggregate limit or any exclusions to the policy that materially change the coverage; (4) indicate the Additional Insureds and Named Insureds as required herein, along with a physical copy of the Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent), as applicable and the endorsement(s) must include policy number(s); (5) reference the Contract by number on the face of the certificate; and (6) expressly reference the inclusion of all required endorsements.

- f) The minimum amounts of insurance required in the detail description of policies (A), (B), (C), and (D) above shall not be construed to limit the extent of the Permittee's liability under this Agreement.
- g) If, at any time during the period of this Agreement, insurance as required is not in effect, or proof thereof is not provided to the Permitter, the Permitter shall have the options to: (1) direct the Permittee to suspend work or operation with no additional cost or extension of time due on account thereof; or (ii) treat such failure as an Event of Default.

H. SCHEDULING PRESENTATION. The Contractor shall submit construction schedule in the form of a bar chart using "Microsoft Project 2010" or latest version, or in an approved equivalent program which shall be directly and fully translatable into Microsoft Project 2010 format, within seven days of the initial Pre-Construction Meeting. Each bar in the chart shall show dates the Contractor plans to start and complete each construction activity after the initial Pre-Construction Meeting. Bar chart shall show the order and interdependence of all activities necessary to complete the work and the sequence in which activity is to be accomplished as planned by the Contractor and in accordance with all subcontractors or suppliers whose work shall be shown on the bar chart. The Contractor shall submit the bar chart for the Engineer's review and revise it, if required, until approved by the Engineer.

The Contractor shall submit weekly progress status update reports or as otherwise directed by the Engineer. The Contractor shall submit updated bar chart every month. The revised bar chart shall be made in the same form and detail as the original submittal and shall be accompanied by an explanation of the reasons for the revisions all of which shall be subject to approval by the Engineer.

I. ACCELERATED PROJECT SCHEDULE AND COMBINATION OF STAGES. Contractor shall plan and/or stage his/her work schedule using all hours/days available. Contractor is advised that all applicable unit prices shall include, for the purpose of this contract, all overtime costs, premium time costs, shift differentials required to complete construction within the specified "Time(s) of Completion" stipulated in this contract.

Contractor shall be permitted to accelerate this project, to combine stages and/or work sequences. Any such changes shall be shown in the construction schedule, to be furnished in accordance with the General Provisions of the Standard Specifications and the above "SCHEDULING PRESENTATION" Article, and shall be submitted for approval of the Engineer.

J. NO EXTENSION OF TIME FOR WINTER SHUT-DOWN. Where the Contractor's approved work schedule for installing sidewalk, curb, roadway base and/or pavement falls within the winter period of December 1st through April 1st, the Contractor will NOT be granted an extension of time for completion of this contract due to the winter shut-down period, unless otherwise provided in Schedule A.

K. THE CONTRACTOR IS NOTIFIED that all electrical work required under this project shall be performed only by a licensed electrician registered with the Department of Buildings and all plumbing work required under this project shall be performed by a licensed plumber under the rules and regulations of the City of New York.

L. START OF CONTRACT WORK. 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.

M. PRICES TO INCLUDE. No direct payment will be made for costs incurred in complying with the foregoing Special Provisions, unless otherwise provided. Said costs will be deemed to have been included in the prices bid for all the scheduled contract items.



Department of Transportation

JANETTE SADIK-KHAN, Commissioner

OCMC TRAFFIC STIPULATIONS

December 24, 2012

OCMC FILE NO: MEC-12-448

CONTRACT NO: HWPLZ004M

PROJECT: RECONSTRUCTION OF PERSHING SQUARE WEST

LOCATION(S): EAST 42 STREET, VANDERBILT AVENUE TO LEXINGTON AVENUE
PARK AVENUE (SOUTHBOUND), EAST 42 STREET TO EAST 40 STREET

PERMISSION IS HEREBY GRANTED TO THE DEPARTMENT OF DESIGN AND CONSTRUCTION AND ITS DULY AUTHORIZED AGENT, TO ENTER UPON AND RESTRICT THE FLOW OF TRAFFIC AT THE ABOVE LOCATION AND ITS LOCAL ADJACENT STREETS FOR THE PURPOSE OF CARRYING OUT THE ABOVE NOTED PROJECT, SUBJECT TO THE STIPULATIONS, AS NOTED BELOW:

A. SPECIAL STIPULATIONS

1. **EMBARGOES** – A CONSTRUCTION EMBARGO WILL APPLY TO THOSE LOCATIONS BELOW WHICH FALL WITHIN THE **HOLIDAY EMBARGO, THE SUMMER STREETS EMBARGO, THE UN GENERAL ASSEMBLY EMBARGO** AND ANY OTHER APPLICABLE SPECIAL EVENT EMBARGOES AS PUBLISHED BY THE BUREAU OF PERMIT MANAGEMENT AND CONSTRUCTION CONTROL.
2. **BIKE LANES** – IF WORK IS IN OR AFFECTING A BIKE LANE, THE CONTRACTOR MUST POST ADVANCE WARNING SIGNS 350 FEET AND 200 FEET PRIOR TO THE WORK ZONE STATING "**CONSTRUCTION IN BIKE LANE AHEAD PROCEED WITH CAUTION**", AND ALSO POST A SIGN AT THE WORK ZONE STATING "**CONSTRUCTION IN BIKE LANE PROCEED WITH CAUTION**". SUCH SIGNS SHALL BE ORANGE, 3' X 3', DIAMOND-SHAPED WITH 4" BLACK LETTERING. SIGNS SHALL BE POSTED IN ACCORDANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. **BUS STOPS** – THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO NYC DOT OCMC AND NEW YORK CITY TRANSIT (NYCT) A MINIMUM OF FIVE (5) WEEKS IN ADVANCE FOR LANE/STREET CLOSURES THAT AFFECT BUS ROUTES/BUS STOPS.
4. **METERS** – THE CONTRACTOR MAY NOT REMOVE OR RELOCATE PARKING METERS WITHOUT FIRST OBTAINING APPROVAL FROM NYCDOT PARKING METER DIVISION AT 718-894-8651.
5. **ACCESS TO ABUTTING PROPERTIES** – THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH ABUTTING PROPERTY OWNERS TO ENSURE ACCESS IS PROVIDED TO/FROM ENTRANCES/DRIVEWAYS AT ALL TIMES.
6. **AUTHORIZED PARKING** – PRIOR TO PERFORMING WORK WHICH IMPACTS AUTHORIZED PARKING, THE CONTRACTOR SHALL SUBMIT IN WRITING, AND COPY OCMC-STREETS, A REQUEST TO OCCUPY SPACE CURRENTLY USED BY AUTHORIZED VEHICLES. APPROVAL MUST BE RECEIVED FROM AUTHORIZED PARKING PRIOR TO OCCUPYING THESE AREAS.
7. **NOTIFICATION** – THE CONTRACTOR MUST AT LEAST TWO (2) WORKING DAYS BEFORE THE START OF CONSTRUCTION NOTIFY THE NYC FIRE DEPARTMENT, NYC POLICE DEPARTMENT, NYC EMS, LOCAL COMMUNITY BOARD, BOROUGH PRESIDENT'S OFFICE-CHIEF ENGINEER, NYCDOT OCMC OFFICE, AND ALL ABUTTING PROPERTY OWNERS.
8. **ENHANCED MITIGATIONS**
 - o **NYPD TRAFFIC AGENTS** ARE REQUIRED FOR THIS PROJECT: A MAXIMUM OF {4} POSTS PLUS RELIEF {WEEKENDS} ON POST FROM {9AM-9PM SATURDAY AND SUNDAY}. NOTE: 2 AGENTS REQUIRED WHEN WORKING ON THE INTERSECTION OF EAST 41 STREET AT PARK AVE, 1 AGENT AT NORTHBOUND PARK AVE AT E41ST AND 1 AGENT AT SOUTHBOUND PARK AVE AT E41ST. 2 AGENTS REQUIRED WHEN WORKING ON THE INTERSECTION AT EAST 40 STREET AT PARK AVE, 1 AGENT AT PARK AVE SOUTHBOUND AT EAST 40 ST AND 1 AGENT AT PARK AVE NORTHBOUND AT E40ST.
 - o **ENHANCED MITIGATIONS FOR PEDESTRIAN FLOW**, INCLUDING METAL FENCING, SHALL BE PROVIDED TO ENSURE PEDESTRIANS STAY WITHIN THEIR DESIGNATED PATH/ROUTE. FLAGGERS SHALL BE PROVIDED TO ASSIST WITH PEDESTRIANS AT THE DESIGNATED CROSSWALK AREAS. THESE FLAGGERS SHALL BE ASSIGNED TO THIS FUNCTION ONLY.
 - o **VARIABLE MESSAGE SIGNS (VMS)** SHALL BE PROVIDED FOR THIS PROJECT. THE LOCATIONS AND MESSAGES SHALL BE RECOMMENDED BY NYCDOT AND THEIR CONTRACTOR A MINIMUM OF TWO (2) WEEKS PRIOR TO WORK COMMENCING, FOR OCMC REVIEW AND APPROVAL.

NYC Department of Transportation
Bureau of Permit Management and Construction Control
55 Water Street - 7th Floor, New York, NY 10041
T: 212.839.9621 F: 212.839.8970
www.nyc.gov/dot

OCMC FILE NO: MEC-12-448
 CONTRACT NO: HWPLZ004M
 PROJECT: RECONSTRUCTION OF PERSHING SQUARE WEST

o "NO STANDING ANYTIME-TEMPORARY CONSTRUCTION" SIGNS AND TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED AND MAINTAINED AS WARRANTED BY THE MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) REQUIRED TO FACILITATE TRAFFIC MOVEMENTS THROUGH THE WORK ZONE. ALL TEMPORARY SIGNS AND PAVEMENT MARKINGS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT. THE CONTRACTOR OR AGENCY PROVIDING PUBLIC OUTREACH SHALL POST AND MAINTAIN ADVISORY SIGNS A MINIMUM OF 48-HOURS PRIOR TO CHANGING EXISTING PARKING REGULATION SIGNS TO APPROVED TEMPORARY CONSTRUCTION PARKING REGULATION SIGNS. THE ADVISORY SIGNS SHOULD BE POSTED ON ALL POLES AND DRIVE RAILS ON THE SEGMENT AFFECTED INDICATING THE DATE OF THE CHANGE, THE NEW REGULATIONS AND A TELEPHONE NUMBER TO OBTAIN INFORMATION.

o COMMUNITY OUTREACH SHALL BE PROVIDED FOR THE DURATION OF THE PROJECT.

B. MAINTENANCE AND PROTECTION OF TRAFFIC

1. EAST 42 STREET, FROM VANDERBILT AVENUE TO LEXINGTON AVENUE

- WORK HOURS SHALL BE AS FOLLOWS: 10PM – 6AM NIGHTLY, MAY WORK UNTIL 8AM ON SATURDAY AND SUNDAY ONLY
- MAINTAIN 2, 11 FT (ELEVEN FT) MOVING LANES DURING WORKING HOURS. 1 WESTBOUND AND 1 EASTBOUND
- INTERSECTION AT PARK AVENUE NORTHBOUND- MAINTAIN 1, 11 FT MOVING LANE PROCEEDING ONTO EAST 42 STREET DURING WORKING HOURS.
- INTERSECTION AT PARK AVENUE SOUTHBOUND-MAINTAIN 1, 12 FOOT LANE PROCEEDING ONTO PARK AVE SOUTHBOUND TO BE USED ONLY FOR LOCAL AND EMERGENCY ACCESS AT ALL TIMES
- FULL WIDTH OF ROADWAY, INCLUDING INTERSECTIONS, SHALL BE OPENED TO TRAFFIC WHEN SITE IS UNATTENDED
- MAINTAIN A 10FT CLEAR SIDEWALK DURING WORKING HOURS
- FULL WIDTH OF BOTH NORTH AND SOUTH SIDEWALKS SHALL BE RESTORED OTHER TIMES.

NOTES

- BEFORE MOBILIZING FOR ANY PORTION OF THIS PROJECT THE PLANS MUST BE SUBMITTED TO NYCDOT BRIDGES DIVISION FOR REVIEW AND APPROVAL AS IT IMPACTS THEIR VIADUCT AND/OR SUPPORT WALLS.
- COORDINATE WITH GRAND CENTRAL TERMINAL OPERATIONS MANAGEMENT AND THE TAXI AND LIMOSINE COMMISSION WITH REGARDS TO IMPACT ON DAILY OPERATIONS.
- COORDINATE WITH THE GRAND HYATT GENERAL MANAGER
- COORDINATE WITH NYCDOT SPECIAL EVENTS UNIT AND THE STREET ACTIVITY PERMIT OFFICE (SAPO) BEFORE MOBILIZING AND FOR DURATION OF PROJECT. THE CONTRACTOR MUST COMPLY WITH THE REQUIREMENTS OF THESE TWO OFFICES FOR THE DURATION OF THIS PROJECT.
- MUST COORDINATE WITH AND DEFER TO THE NEEDS OF "THE METRO-NORTH RAILROAD, GRAND CENTRAL TERMINAL PHASE II LEAK REMEDIATION" PROJECT. CONTRACT#55569, OCMC FILE #MEC-11-285.

2. PARK AVENUE (SOUTHBOUND), EAST 42 STREET TO EAST 41 STREET

- WORK HOURS SHALL BE AS FOLLOWS: WORK MAY OCCUR 24 HOURS A DAY, SEVEN DAYS A WEEK.
- MAINTAIN ONE 12 FOOT LANE FOR LOCAL AND EMERGENCY ACCESS AT ALL TIMES. ROADWAY CLOSED TO THROUGH TRAFFIC AND USED FOR LOCAL AND EMERGENCY PURPOSES ONLY DUE TO FINAL DESIGN OF ROADWAY AND CURBLINES.
- A 10FT (TEN FT) CLEAR SIDEWALK MUST BE MAINTAINED DURING OPERATIONS, THE SIDEWALK MUST BE CLEARED WHEN SITE IS UNATTENDED.

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 CONTRACT NO: HWPLZ004M
 PROJECT: RECONSTRUCTION OF PERSHING SQUARE WEST

3. PARK AVENUE (SOUTHBOUND), EAST 41 STREET TO EAST 40 STREET

- WORK HOURS SHALL BE AS FOLLOWS: 9PM-6AM MONDAY-FRIDAY, MAY ALSO WORK 9PM FRIDAY THROUGH 6AM MONDAY
- MAINTAIN ONE 12 FOOT LANE FOR LOCAL AND EMERGENCY ACCESS DURING WORKING HOURS.
- MAINTAIN A 20FT (TWENTY FT) CLEAR ROADWAY OTHER TIMES.
- THE REMAINDER OF THE EASTERN PORTION OF THE ROADWAY MAY BE USED TO STORE MATERIALS NON WORKING HOURS.

4. INTERSECTION- PARK AVENUE (SOUTHBOUND) AT EAST 41 STREET. INCLUDING THE SEGMENT OF EAST 41 STREETPARK AVE TO MADISON AVENUE.

- WORK HOURS SHALL BE AS FOLLOWS: 9PM-6AM MONDAY-FRIDAY, MAY ALSO WORK 9PM FRIDAY THROUGH 6AM MONDAY
- MAINTAIN 1, 11FT MOVING LANE ON EAST 41 STREET DURING WORKING HOURS
- MAINTAIN 1, 11FT LANE FOR LOCAL AND EMERGENCY ACCESS ON SOUTHBOUND PARK AVENUE DURING WORKING HOURS.
- FULL WIDTH OF ROADWAY, INCLUDING INTERSECTIONS, SHALL BE OPENED TO TRAFFIC WHEN SITE IS UNATTENDED

5. INTERSECTION- PARK AVENUE (SOUTHBOUND) AT EAST 40 STREET. INCLUDING THE SEGMENTS OF: PARK AVE SOUTHBOUND BETWEEN E39ST AND E40ST; AND EAST 40 STREET BETWEEN PARK AVE AND MADISON AVE

- WORK HOURS SHALL BE AS FOLLOWS: 9PM-6AM MONDAY-FRIDAY, MAY ALSO WORK 9PM FRIDAY THROUGH 6AM MONDAY
- MAINTAIN 1, 11FT MOVING LANE ON EAST 40 STREET DURING WORKING HOURS
- MAINTAIN 1, 11FT LANE FOR LOCAL AND EMERGENCY ACCESS ON SOUTHBOUND PARK AVENUE DURING WORKING HOURS
- FULL WIDTH OF ROADWAY, INCLUDING INTERSECTIONS, SHALL BE OPENED TO TRAFFIC WHEN SITE IS UNATTENDED

NOTE:

NO NOISY OPERATIONS MAY OCCUR AT THIS INTERSECTION OR SOUTH OF IT EXCEPT ON WEEKENDS BETWEEN THE HOURS OF 9AM AND 9PM SATURDAY AND SUNDAY

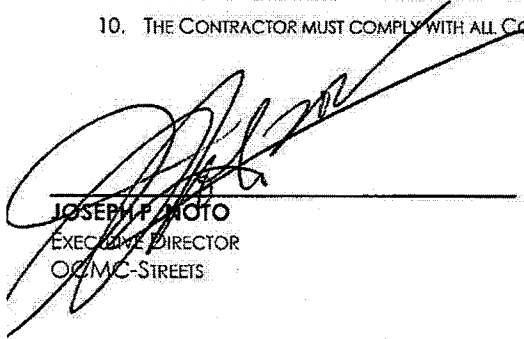
C. GENERAL NOTES

1. **THIS IS NOT A PERMIT.** THIS STIPULATION SHEET MUST BE SUBMITTED WITH ALL REQUESTS FOR PERMITS PERTAINING TO THE ABOVE CONTRACT AND PRESENT AT THE WORK SITE ALONG WITH ALL ACTIVE CONSTRUCTION PERMITS WHEN THE APPROVED WORK IS BEING PERFORMED.
2. ALL RELOCATION WORK BY THE UTILITIES SUCH AS; CON EDISON, TELEPHONE, GAS AND CABLE COMPANIES SHALL PRECEDE THE CONTRACTORS' START OF WORK ON ALL AFFECTED ROADWAYS IN THE IMPACTED CONTRACT AREA.
3. THE CONTRACTOR IS ADVISED THAT OTHER CONTRACTORS MAY BE WORKING IN THE GENERAL AREA DURING THE TERM OF THIS STIPULATION. IN WHICH EVENT, THE CONTRACTOR MAY REQUIRE MODIFICATIONS BY THE OCMC-STREETS.
4. THE PERMITEE IS NOT AUTHORIZED TO ENTER, OCCUPY OR USE ANY PUBLICLY-OWNED OR PRIVATELY OWNED, NON-PAVED, LANDSCAPE OR NON-LANDSCAPED LOCATION WITHOUT SPECIFIC WRITTEN PERMISSION. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A LIMITED-ACCESS ARTERIAL HIGHWAY, WRITTEN APPROVAL FROM THE NYCDOT OCMC-HIGHWAYS IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR PUBLIC PARK, WRITTEN APPROVAL FROM THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION OR NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION IS REQUIRED. WHEN THE LOCATION IS WITHIN THE RIGHT-OF-WAY OF ANY OTHER JURISDICTION SUCH AS PRIVATE PROPERTY, STATE, FEDERAL ETC., IT IS THE PERMITEE'S RESPONSIBILITY TO DETERMINE THE PROPERTY OWNER AND OBTAIN THE WRITTEN APPROVAL.
5. THE PERMITEE SHALL ADHERE TO THE NYCDOT BUREAU OF BRIDGES' SPECIAL PROVISIONS FOR LANDSCAPE PROTECTION, MAINTENANCE AND RESTORATION, ITEMS 1.18.15 THROUGH 1.18.19, WHENEVER AND WHEREVER ANY OF THE PERMITEE'S ACTIVITIES OCCUR WITHIN A LIMITED ACCESS ARTERIAL HIGHWAY RIGHT - OF - WAY.

DECEMBER 24, 2012
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6. NO DEVIATION OR DEPARTURE FROM THESE STIPULATIONS WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE OCMC-STREETS. REQUEST FOR SUCH MODIFICATIONS SHALL BE SUBMITTED TO THE OFFICE OF THE OCMC-STREETS, NEW YORK CITY DEPARTMENT OF TRANSPORTATION, A MINIMUM OF TWENTY (20) DAYS IN ADVANCE FOR CONSIDERATION.
7. FOR THIS PROJECT THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY ADVANCE WARNING AND DETOUR SIGNS, TEMPORARY CONTROL DEVICES, BARRICADES, LIGHTS AND FLASHING ARROW BOARDS IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," THE TYPICAL SCHEMES INCLUDED IN THIS SPECIFICATION, AND AS ORDERED BY THE ENGINEER-IN-CHARGE AND THE OCMC-STREETS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING HIS CONSTRUCTION SIGNAGE. THE IDENTIFICATION SHALL INCLUDE THE CONTRACTOR'S NAME, SPONSORING AGENCY NAME AND THE CONTRACT NUMBER. THE IDENTIFICATION SHALL BE PLACED ON THE BACK OF THE SIGN. THE LETTERING SHALL BE THREE (3) INCHES HIGH.
9. THE OCMC-STREETS RESERVES THE RIGHT TO VOID OR MODIFY THESE STIPULATIONS SHOULD CONSTRUCTION FAIL TO COMMENCE WITHIN TWO (2) YEARS OF THE SIGNED DATE OF THESE STIPULATIONS.
10. THE CONTRACTOR MUST COMPLY WITH ALL CONSTRUCTION EMBARGOS ISSUED BY THE NYCDOT INCLUDING THE HOLIDAY EMBARGO.



JOSEPH P. MUTO
EXECUTIVE DIRECTOR
OCMC-STREETS



JASON S. BUCCHERI
PROJECT MANAGER
OCMC-STREETS

JPN/JB



THE CITY OF NEW YORK Department of Sanitation

S. ELIZABETH SEARLE
Assistant Commissioner
for Legal Affairs

Bureau of Legal Affairs
44 Beaver Street
New York, NY 10004
Telephone (212) 837-8110
FAX (212) 837-8243

Department of Sanitation Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations

INTERPRETIVE MEMORANDUM # 2 February 14, 1995

*Subject: Temporary Storage and Processing of Construction and Demolition Debris
by New York City Agency Contractors*

Contractors performing construction work for New York City agencies may be required to excavate dirt, concrete, rock, gravel and similar materials ("construction materials") from a contract site or to remove from a contract site construction materials resulting from construction, demolition, alteration, repair or renovation of structures, streets or buildings. On street construction projects, construction materials required to be excavated or removed may also include asphalt. The purpose of this Interpretive Memorandum is to (a) define the circumstances under which the Department of Sanitation (the "Department") will not deem its Rules and Regulations Governing Non-Putrescible Solid Waste Transfer Stations (the "Rules") to apply to the temporary storage, processing and/or stockpiling (collectively, "stockpiling") of such construction materials and (b) the procedure for ensuring such exemption. It is the responsibility of the contracting agency to oversee its contractors' compliance with the Rules and with this Interpretive Memorandum.

1. When No Transfer Station Permit is Required

Where a City contractor has:

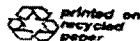
- (a) set aside an area of a contract site for stockpiling construction materials excavated from and/or intended for that site; or
- (b) received written approval from the contracting agency for an off-site stockpiling location,

the Department will not deem such stockpiling location a transfer station and will not require the contractor to obtain a transfer station permit so long as:

- (c) no construction materials or debris from off the contract site are received at the designated location for subsequent transfer to another location (other than the contract site); and
- (d) the temporary stockpiling location is clearly described as such in the contract or clearly approved by the construction agency and designated as such in writing to the Department by the agency; and
- (e) the construction agency represents in writing to the Department that such agency will monitor the temporary stockpiling location and ensure its clean-up and restoration pursuant to the procedures set out in this memorandum.



Help Reduce
New York's Waste.



Example: Street Construction Projects

As part of a contract for street construction, the contractor may be working at one end of a street and using an area at the other end of the street for the temporary stockpiling of construction materials. Both ends of the street are part of the construction contract site. In addition, the contractor may have leased an off-site location for temporary stockpiling of materials, which, following processing, will be reincorporated into the contract site, with some portion of the remainder designated for delivery to a Department disposal facility. Neither location will be regulated by the Department as a transfer station so long as the procedures set out in this memorandum are followed.

2. Procedure for Exception.

Upon a City construction agency's approval of any location to be designated as a temporary processing, storage or stockpiling area, that agency must determine that (a) its contract with the contractor provides for clean-up and restoration of such area by, for example, the contractor's posting of a restoration bond and/or by contractual set-off and (b) the agency has adequate procedures for monitoring the designated area to ensure that it does not violate the provisions set forth in this memorandum and that such location is cleaned up and restored at the completion of the contract work.

The City construction agency must submit an official letter to the Department acknowledging compliance with both (a) and (b) immediately above and representing that the agency will ensure the contractor's compliance. The letter to be submitted must be in substantially the following form, addressed to the Director, Bureau of Waste Disposal, Department of Sanitation, 125 Worth Street, Room 726, New York, NY 10013:

"The New York City Department of _____ (the "Agency")
has awarded a construction contract to _____ (Contractor)
_____ (the "Contractor") for work to be performed at _____ (Contract
Site) _____.

a. This Agency has approved the following locations to be used by the Contractor for the temporary storage, processing and/or stockpiling of construction materials (the "Stockpiling Locations") excavated from the construction site or intended for the construction site:

b. The terms of the contract require the Contractor to clean up and restore the Stockpiling Locations, whether on or off the contract site, at or before the completion of the contract work.

c. This Agency assumes responsibility for the monitoring of Stockpiling Locations to ensure that only materials received from and/or intended for the construction site are stockpiled at such locations and we will enforce clean-up and restoration of such Locations at the end of their use for temporary stockpiling or at the termination of the contract, whichever occurs earlier, through restoration

bonding requirements and/or contractual set-off provisions such that the costs of clean-up and restoration will not become a charge to the Department or the City. "

3. When a Transfer Station Permit is Required

A transfer station permit will be required under any circumstances other than those outlined above. Except in the specifically defined circumstances set forth in this memorandum, any operator of a location or facility which receives, processes, stores or stockpiles construction and demolition debris or fill material for purposes of transfer to another location, including to a New York City Department of Sanitation facility, and whether or not under contract to the Department for the delivery of such materials, will be fully subject to the Department's transfer station rules and liable for enforcement for violations.

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ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING PLAZA

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

Together With All Work Incidental Thereto

BOROUGH OF MANHATTAN

ADDENDUM NO. 2

DATED: February 8, 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

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, street name signs, traffic signs and encumbrances including, but not limited to, underground conduit displaced as the result of the installation of the new sewers, water mains, catch basins, catch basin connections and appurtenances shall be replaced in kind and as directed by the Engineer. The cost of such work shall be deemed included in the prices bid for all items of work under this contract.
- (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) The Contractor is advised that where the existing roadway pavement is designated to be replaced from curb to curb, then no full depth saw cutting of pavement for sewer and water main trenches will be required, except at the limits of full width pavement restoration. No separate or additional payment will be made for any saw cutting.
- (10) The Contractor shall exercise extreme caution and take all necessary precautions in placing sheeting and excavating to prevent any damage to the existing NYC TRANSIT'S subway structures and its appurtenances during construction work throughout the project area. The Contractor shall take full responsibility to protect the said NYC TRANSIT'S subway structures and its appurtenances and any damage caused by the Contractor's operations shall be made good by the Contractor to the satisfaction of the Engineer at no additional cost to the City.
- (11) The Contractor shall submit shop drawings to NYC Transit Authority showing all the details and methods of construction, such as, sheeting and bracing, including the Contractor's procedure and sequence of construction, supporting and/or protection of the existing TA's structures and its appurtenances, with necessary design calculations for approval prior to starting of the construction. The design shall be made by a New York State Licensed Professional Engineer skilled in this type of construction and as further evidenced by the imprint of Professional Engineer's seal and signature on all drawings. The cost of this work shall be deemed included in the price bid for all items of work under this contract.

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 1.06.14 - Notice To Utility Companies, Etc., To Remove Structures Occupying Place Of Sewers, Water Mains Or Appurtenances, Page I-10:

Add the following to Subsection 1.06.14:

- (1) CONSOLIDATED EDISON COMPANY OF NEW YORK (CON EDISON)

There are CON EDISON facilities in the area of construction. The Contractor shall notify CON EDISON at least seventy-two (72) hours prior to the start of construction by contacting Ms. Theresa Kong at (212) 460-4834.

- (2) VERIZON

There are VERIZON facilities in the area of construction. The Contractor shall notify VERIZON at least seventy-two (72) hours prior to the start of construction by contacting Mr. Michael Fitzpatrick at (718) 977-8142.

(3) TIME WARNER CABLE OF NEW YORK CITY

There are TIME WARNER CABLE facilities in the area of construction. The Contractor shall notify TIME WARNER CABLE at least seventy-two (72) hours prior to the start of construction by contacting Mr. John Piazza at (718) 888-4261.

(3) **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 construction.

(2) NEW YORK CITY FIRE DEPARTMENT

The Contractor shall notify the Bureau of Fire Communications at least thirty (30) days prior to the start of construction by contacting Mr. Ed Durkin at (718) 624-3752.

(3) N.Y.C. DEPARTMENT OF TRANSPORTATION

The Contractor shall notify Mr. Steve Galgano, P.E. Chief of Signal/Street Lighting Operations, 34-02 Queens Blvd., Long Island City, N.Y. 11101 at (718) 786-3550, at least seventy-two (72) hours prior to the start of construction.

(4) N.Y.C. DEPARTMENT OF PARKS AND RECREATION

The Contractor shall notify the Parks Department at least seventy-two (72) hours prior to the start of construction by contacting Mr. Brendan Shera at (718) 760-6622.

(5) N.Y.C. TRANSIT AUTHORITY

- (a) The Contractor shall notify Outside Projects at least seven (7) days prior to the start of construction.

The Contractor shall contact:

Mr. Mohamed Adam, P.E.
Project Engineer-Outside Projects
New York City Transit
2 Broadway, 7th Floor
New York, N.Y. 10004
Attention Ms. Alina Avadanei
Telephone No. (646) 252-3641

- (b) The Contractor is advised that bus routes as well as bus stops, within the scope of this project may be affected during construction operations. The Contractor shall notify the Transit Authority at least two (2) weeks prior to the start of construction, in order to make the necessary arrangements as required under the NYC TRANSIT GENERAL NOTES included in **Section 1.06.24A, Section 1.06.24B** and **Section 1.06.24C** of this addendum.

Arrangements shall be made through:

Ms. Sarah Wyss
 Director Of Short Range, Bus Service Planning (SRB)
 New York City Transit
 2 Broadway, Room B17.50
 New York, N.Y. 10004
 Telephone No. (646) 252-5517
 sarah.wyss@nyc.com

(c) In addition, the Contractor is advised that construction operations might affect subway lines and stations; and NYCT facilities (i.e. manholes, ducts, etc.). The Contractor shall notify the Transit Authority as required and specified in **Section 1.06.24A**, **Section 1.06.24B** and **Section 1.06.24C** of this addendum.

- (4) **Refer to Subsection 1.06.24 - Contractor To Carry Out Agreement Between City And Railroad Company Or Property Owner(s)**, Page I-14:
Add the following to **Subsection 1.06.24**:

1.06.24A - NYC TRANSIT GENERAL NOTES

For NYC TRANSIT notes see the contract drawings.

1.06.24B - NYC TRANSIT REQUIREMENTS

N.Y.C. TRANSIT INSURANCE: The Contractor (Permittee) shall indemnify and save harmless the City of New York and the New York City Transit (Permitter) in accordance with the following "Insurance Requirements" and proof that the necessary insurance is in effect will be required before work can commence:

NYCT "OUTSIDE CONTRACT" INSURANCE REQUIREMENTS

(1) The Permittee at its sole cost and expense shall carry or cause to be carried and shall maintain at all times during the period of performance under this Agreement policies of insurance as herein below set forth below:

- (A) Workers' Compensation Insurance - (including Employer's Liability Insurance) with limits as specified in Schedule "A", which limit may be met by a combination of primary and excess insurance meeting the statutory limits of New York State. The policy shall be endorsed to include Longshoreman's and Harbor Workers' Compensation Act/Maritime Coverage Endorsement and/or Jones Act Endorsement when applicable.
- (B) Commercial General Liability Insurance - (I.S.O. 2001 Form or equivalent) approved by Permitter in the Permittee's name with limits of liability as specified in Schedule "A" for each occurrence on a combined single limit basis for injuries to persons (including death) and damages to property. The limits may be provided in the form of a primary policy or combination of primary and umbrella/excess policy. When the minimum contract amounts can only be met when applying the umbrella/excess policy; the Umbrella/Excess Policy must follow form of the underlying policy and be extended to "drop down" to become primary in the event primary limits are reduced or aggregate limits are exhausted. Such insurance shall be primary and non-contributory to any other valid and collectable insurance and must be exhausted before implicating any Permitter/MTA policy available.

Such policy should be written on an occurrence form; and shall include:

- Contractual coverage for liability assumed by the Permittee under this agreement;

- Personal and Advertising Injury Coverage;
- Products-Completed. Operations;
- Independent Contractors Coverage;
- "XCU" coverage (Explosion, Collapse, and Underground Hazards) where necessary;
- Contractual Liability Exclusion, applicable to construction or demolition operations to be performed within 50 feet of railroad tracks, must be voided, where necessary; and,
- Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent) approved the Permittor naming:

New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA), the Staten Island Rapid Transit Operating Authority (SIRTOA), MTA Capital Construction Co., the Metropolitan Transportation Authority (MTA) including its subsidiaries and affiliates, and the City of New York (as Owner).

(C) Business Automobile Liability Insurance Policy - (I.S.O. Form CA 00 01 10 01 or equivalent) approved by the Permittor is required if Permittee's vehicle enters Permittor property. The insurance must be in the name of the Permittee or its contractor entering the Permittor property with limits of liability in the amount specified in Schedule "A" for claims for bodily injuries (including death) to persons and for damage to property arising out of the ownership, maintenance or use of any owned, hired or non-owned motor vehicle.

(D) Railroad Protective Liability Insurance policy shall be required as specified in Schedule "A".

(E) Environmental/Pollution Exposures:

In the event environmental or pollution exposures exist, the Permittee shall require the environmental contractor or sub-contractor to provide the applicable insurance covering such exposure. The limits and type of insurance provided shall be satisfactory to the Permittor and will be confirmed to the parties prior to the start of the work.

(2) General Requirements Applicable To Insurance Policies:

- (a) All of the insurance required by this Article shall be with Companies licensed or authorized to do business in the State of New York with an A.M. Best Company rating of not less than A-/VII or better and reasonably approved by the Permittor/MTA and shall deliver evidence of such policies.
- (b) Except for Workers Compensation, all references to forms and coverages referred to above shall be the most recent used by the Insurance Services Office, Inc. (ISO) or equivalent forms approved by the Insurance Department of the State of New York, provided, however, that excess coverages may be written on forms reasonably acceptable to Permittor containing provisions other than those contained in ISO forms but otherwise conforming in substance to the requirements of this Article.
- (c) The Permittee or its Contractor performing the work shall furnish evidence of all policies before any work is started to the permittor:

For NYCT Contract Inspection
 C/O Mr. John Malvasio
 Director, MOW Engineering
 130 Livingston Street, Room 8044F
 Brooklyn, NY 11201
 Telephone: (718) 694-1358

These policies must: (i) be written in accordance with the requirements of the paragraphs above, as applicable; (ii) be endorsed in form acceptable to include a provision that the policy will not be canceled, materially changed, or not renewed, unless otherwise indicated herein, at least thirty (30) days prior written notice to the Permittor c/o MTA Risk and Insurance Management (MTA RIM) Department - Standards, Enforcement & Claims Unit, 2 Broadway - 21st floor, New York, NY 10004; and (iii) state or be endorsed to provide that the coverage afforded under the contractor's policies shall apply on a primary and not on an excess or contributing basis with any policies which may be available to the Permittor/MTA, and also that the contractor's policies, primary and excess, must be exhausted before implicating any Permittor/MTA policy available. (iv) In addition, contractor's policies shall state or be endorsed to provide that, if a subcontractor's policy contains any provision that may adversely affect whether contractor's policies are primary and must be exhausted before implicating any Permittor/MTA policy available, contractor's and subcontractor's policies shall nevertheless be primary and must be exhausted before implicating any Permittor/MTA policy available. Except for Professional Liability, policies written on claims made basis are not acceptable. At least two (2) weeks prior to the expiration of the policies, contractor shall endeavor to provide evidence of renewal or replacement policies of insurance, with terms and limits no less favorable than the expiring policies. Except as otherwise indicated in the detailed coverage paragraphs below, self-insured retentions and policy deductibles shall not exceed \$100,000, unless such increased deductible or retention is approved by Permittor/MTA. The Permittee shall be responsible for all claim expense and loss payments within the deductible or self-insured retention. The insurance monetary limits required herein may be met through the combined use of the insured's primary and umbrella/excess policies.

- (d) Certificates of Insurance may be supplied as evidence of policies of the above policies, except for Policy (D) Railroad Protective Liability Insurance Policy. However, if requested by the Permittor, the Permittee shall deliver to the Authority, within forty-five (45) days of request, a copy of such policies, certified by the insurance carrier as being true and complete. The Railroad Protective Liability Insurance Policy must be provided in the form of the Original Policy. A detailed Insurance Binder may be provided, ACORD or Manuscript Form, pending issuance of the Original Policy. The Original Policy must be submitted to MTA RIM within thirty (30) days of the Binder Approval.
- (e) If a Certificate of Insurance is submitted, it must: (1) be provided on the Permittor Certificate of Insurance Form or MTA Certificate of Insurance Form for Joint Agency Agreements; (2) be signed by an authorized representative of the insurance carrier or producer and notarized; (3) disclose any deductible, self-insured retention, sub-limit, aggregate limit or any exclusions to the policy that materially change the coverage; (4) indicate the Additional Insureds and Named Insureds as required herein, along with a physical copy of the Additional Insured Endorsement (I.S.O. Form CG 20 26 07/04 version or equivalent), as applicable and the endorsement(s) must include policy number(s); (5) reference the Contract by number on the face of the certificate; and (6) expressly reference the inclusion of all required endorsements.
- (f) The minimum amounts of insurance required in the detail description of policies (A), (B), (C), and (D) above shall not be construed to limit the extent of the Permittee's liability under this Agreement.
- (g) If, at any time during the period of this Agreement, insurance as required is not in effect, or proof thereof is not provided to the Permittor, the Permittor shall have the options to: (i) direct the Permittee to suspend work or operation with no additional cost or extension of time due on account thereof; or (ii) treat such failure as an Event of Default.

1.06.24C - NYC TRANSIT CURRENT AND FUTURE PROJECTS

The Contractor is notified of the following:

- (1) The following subway lines are within the area of this project:

- (a) The **IRT Nos. 4, 5 and 6 Trains** are running along Lexington Avenue
 - (b) The **IRT No. 7 Train** is running along 42nd Street
- (2) The Contactor can obtain NYC Transit Structural Drawings by contacting Mr. Vasanth K. Battu at (646) 252-4473.

The Contractor shall also obtain from Mr. Vasanth K. Battu the Power Engineering Activities for the area of this project.

- (3) The project might have an impact at the following stations:
- (a) Grand Central-42nd Street Station for the IRT Trains - Lexington Line
 - (b) Grand Central-42nd Street Station for the IRT Train - Flushing Line

Should it become necessary to close any of the entrances for the above station, see Note No. 14.35 from the General Notes that are made part of the contract drawings.

- (4) (a) The following tables showing NYC Transit's current and planned projects that may impact and/or interfere with this project might require the Contractor to coordinate construction work with NYCT contractors. These tables are for information only:

Grand Central-42nd Street Station - Lexington Line

Contract	Project Title	Design Manager/ Telephone No.	Construction Manager/ Telephone No.	Resident Engineer/ Telephone No.
W-32648	Sonet/ATM Comm. Network System Ph. I	K Asamoah/ (646) 252-4064	M. Islam/ (646) 252-3784	D. Patel/ (646) 252-3644
W-32658	Public Address System IRT Stations	N. Ng/ (646) 252-6773	D. Stracquatano/ (646) 252-4065	A. Manragh/ (212) 883-7486
C-43027	HVAC Comm. Rooms	L. Tonn/ (646) 252-2051	A/S. Abraham/ (646) 252-4736	V. Tadla/ (646) 252-4444
W-32686	Radio System Upgrade-Phase I	K Asamoah/ (646) 252-4064	K. Majmudar/ (646) 252-3773	N/A
MW24-6618	New Fan Plant	C. Bergonzo/ (646) 252-4788	Undesignated	N/A
A-36151	Grand Central Access Improvement	S. Moy/ (646) 252-4320	J. Mendola/ (646) 252-4409	N/A
E-34022	Replace 10 Hydraulic Elevators	Undesignated	Undesignated	N/A
ST19-6602	Station Normal Replacement Work	S. Moy/ (646) 252-4320	J. Mendola/ (646) 252-4409	N/A
C-30813	Substation Enclosure	S. Patel/ (646) 2524570	G. Balagangayan/ (646) 252-2415	N/A

Grand Central-42nd Street Station - Flushing Line

Contract	Project Title	Design Manager/ Telephone No.	Construction Manager/ Telephone No.	Resident Engineer/ Telephone No.
W-34503	Upgrade RTO Radio Base St. to Fiber	K Asamoah/ (646) 252-4064	M.V. Mathew/ (718) 559-3278	A. Haldar/ (718) 559-3271
W-32663	Public Address System (Wrap-Up)	R. Fishelberg/ (646) 252-2828	M. Jameson/ (646) 252-2827	N/A
S-32723	Comm. Based Train Control (CBTC)	T. Basu/ (646) 252-3192	S. Thomas/ (646) 252-3049	R. Wilson/ (212) 343-2304
C-43026	HVAC Fixes Comm. Rooms	K Asamoah/ (646) 252-4064	K. Majmudar/ (212) 268-895	N/A

S-32184	Replace 845 Emerg. Alarm units	Undesignated	Undesignated	N/A
W-32657	Automatic Train Supervision	Undesignated	Undesignated	N/A

(5) **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.

(6) **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 refer to Traffic Stipulations identified in the maintenance of traffic requirements under Highway Contract No. HWPLZ004M.

(7) **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.

(8) **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.

- (9) **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.

- (10) **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.

- (11) **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.

(12) 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 preconstruction 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).

(13) 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.

(14) 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.

(15) **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":

(16) **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":

(17) **Refer** to Section 5.11 - Outfall Structures, Subsection 5.11.2 - Materials, Page V-95:
Delete from Subsection 5.11.2, 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 $30 \pm 2\%$ 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".

(18) **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.

(19) **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.

(20) **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)**.

(21) **Refer to Subsection 5.32.4 - Specific Pavement Restoration Provisions, Page V-185:**
Add the following to **Subsection 5.32.4**:

(E) Specific Pavement Restoration Provisions:

- (1) Within the limits of the highway rehabilitation the restoration shall be accomplished and paid for in accordance with Highway Construction Plans, Details and Specifications for Highway Project ID. HWPLZ004M.
- (2) In East 42nd Street from approximately 90-feet west of the west side building line of Park Avenue to approximately 320-feet east of the east building line of Park Avenue, including intersection, the restoration shall be as follows:
 - (a) The existing roadway shall be removed from **curb to curb** or **edge to edge** and the entire area shall receive a permanent pavement restoration that shall consist of a top course of three (3) inches of Asphaltic Concrete Wearing Course on a base course of nine (9) inches of extra-high-early strength concrete, as directed by the Engineer.
- (3) In Park Avenue South from the north curb line of East 41st Street to approximately 40-feet north of the north building line of East 40th Street; East 41st Street from the east curb line of Park Avenue North to approximately 130-feet west of the west building line of Park Avenue including intersection; and, East 40th Street from approximately 85-feet west of the west building line of Park Avenue to the east building line of Madison Avenue; and, Park Avenue South from the south building line of the 40th Street to approximately 100 feet south of south building line of 40th Street, the restoration shall be as follows:
 - (a) The permanent restoration over the **trench width and cutbacks only** shall consist of a top course of a minimum of three (3) inches of binder mixture on a base course of a minimum of nine (9) inches of high-early strength concrete, to match the existing pavement as directed by the Engineer.
 - (b) Finally an overlay of two (2) inches of asphaltic concrete wearing course shall be installed over the entire width of the roadway from **curb to curb** or **edge to edge** of existing roadway.
- (4) In East 40th Street from the west building line of Park Avenue to approximately 85-feet west of the west building line of Park Avenue and in Park Avenue South from south building line of 40th Street to approximately 40ft north of north building line of 40th Street including intersection, the restoration shall be as follows:
 - (a) The existing roadway shall be removed from **curb to curb** or **edge to edge** and the entire area shall receive a permanent pavement restoration that shall consist of a top course of three (3) inches of Asphaltic Concrete Wearing Course on a base course of nine (9) inches of high-early strength concrete, as directed by the Engineer.
- (5) The following requirements shall apply to the areas specified in subsections (2), (3) and (4) above:
 - (a) Before the top course is installed, an additional width of asphalt beyond the edge of new base course shall be saw-cut and removed from all edges of trenches to a depth

to accommodate the specified top course and the entire area restored. This additional removal shall be in accordance with paragraph (b) below.

- (b) Pavement excavation along with saw cutting of pavements for sewer and water main trenches shall be in accordance with **Section 5.30 - Pavement Excavation** of both the Standard Sewer Specifications and the Standard Water Main Specification.
- (c) At locations requiring the installation of a concrete base course, a reflective cracking membrane shall be installed over joints prior to restoration, the cost of which shall be deemed included in the prices bid for all pavement restoration items. Additionally, appropriate pavement keys as described below shall be used.
- (d) Pavement keys **Type B-1** shall be used to insure a desired four (4) inch curb reveal (two and one-half (2-1/2) inch absolute minimum). Pavement key **Type A** shall be used in all intersections. Both keys are to be per Bureau of Highways Operations Specifications and Standard Details of Construction.
- (e) Unless otherwise specified, the cost for tack coating, removal of pavement markings, placement and eradication of temporary roadway markings, stripping or milling of pavement keys and adjustment of city-owned castings shall be deemed included in the prices bid for all pavement restoration items.
- (f) Payment for removal and permanent placement of pavement marking with thermoplastic reflectorized pavement markings (crosswalk and lane dividers) shall be made under Item No. 6.44 - THERMOPLASTIC REFLECTORIZED PAVEMENT MARKINGS (4" WIDE).
- (g) Payment for pavement restoration shall be made under the following items:

<u>Item No.</u>	<u>Item</u>	<u>Payment Description</u>
4.02 AF-R	Asphaltic Concrete Wearing Course, 2" Thick	(For 2" asphaltic concrete wearing course over trenches and cutbacks.)
4.02 AG	Asphaltic Concrete Wearing Course, 3" Thick	(For asphaltic concrete wearing course for entire width of roadway restoration.)
4.02 CB	Asphaltic Concrete Mixture	(For binder mixture top course when overlay is required; binder mixture in Type A and B Keys; and binder mixture to fill in roadway depressions and to provide a leveling course prior to overlay where ordered.)
4.04 H	Concrete Base For Pavement, Variable Thickness For Trench Restoration, (High-Early Strength)	(For concrete base course over trenches and cutbacks.)
4.04 HD	Concrete Base For Pavement, 9" Thick (High-Early Strength)	(For concrete base course for entire width of roadway restoration.)
6.97 A	Extra-High-Early Strength Concrete	(For concrete base course for entire width of roadway restoration.)

(22)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/trafairs.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 Standard Water Main Specifications (August 1, 2009), **Section 5.32 - Final Restoration Of Pavements**, Page V-99:

Add the following to **Subsection 5.32.4 - Specific Pavement Restoration Provisions**:

See amended Standard Sewer Specifications (August 1, 2009) **Subsection 5.32.4 - Specific Pavement Restoration Provisions** of this addendum.

(20) 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'.

END OF ADDENDUM NO. 2

This Addendum consists of twenty-five (25) pages.

NO TEXT ON THIS PAGE

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING PLAZA

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

ADDENDUM NO. 3

DATED: March 23, 2009

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.

GAS COST SHARING (EP-7) STANDARD SPECIFICATIONS

EP-7 GAS COST SHARING STANDARD SPECIFICATIONS

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I - NOTICE TO ALL BIDDERS; GAS COST SHARING WORK

All prospective bidders are hereby advised that, pursuant to the "Gas Facility Cost Allocation Act", ("the Act"), the City of New York has entered into an agreement ("the Agreement") with the gas companies (Con Edison or National Grid (formerly KeySpan Energy Delivery)) operating in their respective areas of the City to "share" the cost of facility relocation and/or support and protection of facilities disturbed by proposed water and/or sewer and related City work specified in this contract. Therefore, bid items, specifications and estimated quantities for the incremental costs of support and protection of certain gas facilities have been included in this contract. The low bid for this contract shall be determined by examining each bid for all work to be performed under this contract including any work of support and protection of gas facilities to be performed. The Contractor shall not seek additional compensation from gas companies except as specifically set forth in its contract.

II - GENERAL PROVISIONS; GAS COST SHARING WORK

1. General:

The Contractor shall perform City work with interferences from existing live and abandoned gas facilities. This shall be defined as utility work. Therefore, this contract include bid items, specifications and estimated quantities designed to fully compensate him/her for the incremental costs of supporting, protecting, provide accommodations and, avoid disturbing gas facilities located in the streets shown on the contract drawings. In the event that any other provisions of this contract related to gas facilities (or private utilities) conflict with these provisions, these provisions shall supersede and govern all work related to gas facilities owned by the companies operating in the project area. All utility work, as defined in these specifications, including changes and additions thereto shall be paid solely by the City except when specified otherwise in this contract. Contractor hereby agrees that the facility operator shall not be liable to pay him/her for any work performed including extra utility work. Contractor agrees that its bid prices include all compensation for loss of productivity and efficiency, idle time, delays (including any delays occasioned by negotiation of a contract change), change in operations, mobilization, demobilization, remobilization, added cost or expense, lost of profit, other damages or impact costs that may be suffered by or because of utility work, or the presence of gas facilities in the proximity of City work and that it will not seek additional compensation for these items. All disputes shall be resolved as specified in the contract.

Pursuant to the Act, Agreement, and the New York City Administrative Code, the gas company(ies) has been directed by the Commissioner and is required to perform all maintenance, repairs, replacement, shifting, alteration, relocation, and/or removal work that are not part of this contract. By having bid on this contract, the Contractor understands and agrees that the Commissioner has preasserted any right the City has to require, including the issuance of any directives or so called "order outs" under the New York City Administrative Code, any or all gas companies to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove all gas facilities that are about to be disturbed by the City contract work. The issuance of additional such directives during the performance of the contract work, where necessary in the sole judgment of the Commissioner, shall be initiated by such Commissioner as set forth in the relevant sections of the Act and Agreement. Contractor further agrees to insert such requirements as set forth herein above into any contracts with its approved subcontractors so that its subcontractors also understand and agree to such contract requirements.

2. Gas Interferences And Accommodations:

During the performance of sewer and water main work funded by the New York City Department of Environmental Protection (NYCDEP), as instructed by the Engineer, the use of any applicable contract bid item is allowed in order to resolve and accommodate all gas facilities interferences with such City work, including the removal of contaminated soil in associated trench excavation. This is in addition to the specified EP-7 bid items in the contract. Payment for such accommodation shall be funded by EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" (F.S. Fixed Sum). The value of such accommodation shall be computed by multiplying the appropriate unit prices bid to the

quantity of work performed, as determined by the Engineer, and applying the total amount thus to be paid to EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS". When EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" does not exist, such additional accommodation work shall be at no cost to the City but shall be a matter of adjustment between gas facility operator and Contractor. Private facilities, other than gas, that become in interference due to gas interferences accommodations shall also be accommodated, if so directed by the Resident Engineer, at no additional cost to the City and, provided that its owner agrees to be responsible for all additional costs to Contractor, otherwise, such facility shall be ordered by the City to be maintained, shifted, relocated or replaced by its owner at his/her expenses.

2a. Water Main Accommodations:

When water main construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the vertical or horizontal alignment of water mains including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and laying offset fittings and pipes, etc., necessary in order to complete water main installation and, avoid gas interferences in the project area, including street intersections. Typical work method accommodations shall include, but not be limited to, pier and plate, installation of filter fabric and select fill, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of water mains standards and specifications.

2b. Sewer Accommodations:

When sewer construction is to be performed in this contract, Contractor shall be required, if warranted by field conditions, and at locations designated by the Resident or Borough Engineer, to change the horizontal alignment of sewer facilities (if possible) including but not limited to all additional labor, material, work method accommodations, furnishing, delivering and construction of additional manholes or modification of manholes/catch basins, extending chute connections, house connections, using alternate materials and methods, poured-in-place structures, etc., necessary in order to complete sewer installation and, avoid gas interferences in the project area, including street intersections. The term sewer facility shall include, but not be limited to, all sewer pipe and appurtenances, manholes, catch basins, catch basin chutes, etc. Such work shall be performed as directed by the Engineer and in accordance with contract specifications and latest edition of sewer standards and specifications.

3. Quantity Overruns, EP-7 Funded Bid Items:

No quantity overrun, in excess of one hundred twenty five (125) percent, shall be permitted for EP-7 funded bid items (gas) included in this contract, except when Resident Engineer determines that such overruns are caused by field modifications to planned City work, or approved construction methods, or contract scope changes. Overruns not paid by City shall be negotiated and paid to Contractor by gas facility operator who then shall be entitled to reimbursement by NYCDEP under established cost sharing procedures.

4. Changes And Extra Work:

This section is not applicable to work defined under "Emergency Reconstruction Contracts" or so-called "Where and When Contracts" since these projects, by definition, inherently encounter unanticipated gas facilities and cannot be pre-engineered. In all other cases, any contract changes proposed for City work shall also cover and include all associated changes to support and protection of gas facilities affected by such changes to City work. In all other cases where the Contractor finds that City work cannot be performed as planned and specified and/or, as approved because of a need to support, protect and/or alleviate interferences from gas facilities that were not listed and/or shown, or incorrectly shown in contract plans and specifications, he shall immediately notify the Resident Engineer and the facility operators' representative of his findings. Resident Engineer shall promptly examine such claims and determine whether or not such work is covered by contract bid items and /or specifications (contract bid items and specifications shall include city contract items as well as EP-7 items). The Resident Engineer shall also examine the claim to determine if the application of EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" is appropriate to resolve the claim. If upon examination, the Engineer determines that such field conditions were unanticipated (not shown and/or listed, or incorrectly shown in contract documents) and are not covered by bid items and contract specifications, he

shall then direct the Contractor and the affected facility operator to negotiate the cost of supporting and protecting, and/or alleviating the impact on City work caused by such unanticipated gas facilities with each other with the understanding that the performance of City work shall continue during negotiations. If a cost agreement is reached, the Contractor and facility operator shall adjust such costs between themselves at no additional costs to the City contract. If the Contractor and affected facility operator do not reach an agreement concerning the price to be paid for the extra work within five (5) business days of the Engineer's directive to engage into such negotiations and, after considering: public safety and inconvenience, requirements of laws and regulations applicable to private utilities, integrity of all utility systems, including but not limited to sewer and water, gas, electric, telephone and, cable TV facilities, sound engineering practices, cost (long and short term) to all affected parties, and potential City work delays, then the Resident Engineer, depending on nature and severity of interferences with City work, shall either, direct the facility operator to relocate or replace its facilities at its own discretion and cost, reimbursable by NYCDEP under established gas cost sharing procedures or, direct the Contractor to perform the utility work on actual time, material and equipment costs basis pursuant to relevant contract requirements and amendments. Contract bid prices for any applicable items of work involved shall be applied, or converted to an allowance for time and material charges. Changes shall be for affected portions of utility work and, shall be processed with EP-7 funds.

5. Excavation:

All excavators shall notify the NYC/LI One Call Center at 1-800-272-4480 at least two (2) working days, not including the day of the call, but not more than ten (10) working days in advance of the start of any excavation work. The gas company(ies) will mark out its facilities within the project limits and provide Construction Inspector(s) during all excavation work in close proximity (within twelve (12) inches) to gas facilities. The Contractor shall exercise extreme caution when excavating in the vicinity of any gas facilities. Hand excavation shall be performed within twelve (12) inches of gas facilities. The Contractor prior to excavating underneath these facilities shall adequately support all gas facilities. Standard support details for gas facilities have been included in the specifications. Any damage to gas facilities shall be reported immediately to the gas company(ies). The Contractor shall be responsible for all cost associated with repairs made necessary by damages caused by his operations.

6. Backfilling And Street Restoration:

Backfilling operations and street restorations shall be in accordance with contract requirements.

7. Non-Responsive Bids:

Every gas (EP-7) bid item has a suggested "Not less than" value per unit indicated on contract bid sheet. Bids resulting in cost of less than suggested for EP-7 items are hereby prohibited and if submitted shall be considered NON-RESPONSIVE.

8. Minimum Clearances:

Clearance requirements for City work shall govern and supersede any clearance requirement of gas facility operator. Therefore, a minimum of twelve (12) inches clearance between private utilities and City water mains, sewers or related structures to be installed in this contract shall be maintained. When this clearance is not attainable, the Resident Engineer may allow a minimum of four (4) inches clearance. With less than twelve (12) inches clearance a neoprene/polyethylene shield (to be provided by facility operator) shall be installed as part of all work item specifications. However, if Resident Engineer determines that City work cannot be performed within allowable clearance and no reasonable City accommodation (no-cost change to City work) is possible, the City shall direct the facility operator to remove, relocate, shift, or alter their facility(ies) pursuant to the New York City Administrative Code.

9. Work By Facility Operator:

The facility operator may find it necessary to perform the following types of work during performance of City work: accommodating a contractor's request for gas facilities modifications (in order to facilitate City contractor's proposed construction method) or, remedial and emergency work on gas facilities proper with their own resources and materials if an approved method of construction for City work causes unanticipated disturbances to gas facilities or, replacing defective gas facilities when they are exposed by the Contractor and their actual conditions are observable by the facility operator. Also included in the

above category of defective gas facilities are: the presence of environmental contaminants attributable to the gas facility in or around gas facilities. If such work is deemed required by the facility operator or if facility operator is directed by the City to address such deficiencies at any time during the course of construction, the Contractor shall modify the construction schedule at no cost to the City and allow the facility operator five (5) business days to perform such work without interferences. Additional costs to the facility operator (in cases of accommodations) or, Contractor (in cases of defective gas facilities) due to such gas work, if any, shall be the responsibility of the parties involved and not of the City. Such costs shall be a matter of adjustment between the Contractor and the facility operator.

10. Materials Furnished By Facility Operator:

It shall be the Contractor's responsibility to inspect material to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional costs to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

11. Liability And Insurance:

Notwithstanding the provisions of this contract, the existing division of liabilities to third parties shall remain the same as between the City and the company. Therefore, it is specifically agreed by the City, company and Contractor (by bidding on this contract) that for the purpose of any liabilities to third parties, that the City contractor performing work directly and physically relating to gas company facilities in this project, shall be deemed an agent of the company and not an agent of the City, the New York City Municipal Water Finance Authority, or the New York City Water Board. Contractor shall include the company as an additional insured on all insurance policies maintained to comply with the City's insurance requirements.

12. Width And Depth Of Excavation:

Contractor shall not be authorized to deliberately change trench or excavation widths and/or depth specified without Engineer's approval. Enlargement of any side of excavation up to eighteen (18) inches beyond pay limits (or inside face of sheeting) requested by the Contractor for the installation of certain types of sheeting may be granted. However, such enlargements or those greater than allowable shall not be approved when, in the sole judgment of the City, field conditions allow the water mains and sewer work to be performed within the limits specified and, the sole purpose of such enlargement request is to impact adjacent utilities (public or private) whose support and protection are part of this contract. Any approval shall be given at no additional cost to the City contract, including EP-7 funding, and all costs associated with unauthorized enlargements shall be the sole responsibility of the Contractor.

13. Depth And Crossing Angles Of Gas Facilities:

Where gas facilities are shown (or specified as) crossing proposed alignment of sewers, water mains, catch basins and chute connections or any other proposed excavations at specific angles (as measured off plans or sketches or specified in contract), it shall be understood that actual field measurements may deviate (plus or minus) forty-five (45) degrees from those shown or specified. The cover, or depth from street surface to top of facilities, shall be as shown or specified in contract documents, no deviation is to be assumed. Where gas facilities are not shown on contract documents, but their support and protection are otherwise included in this contract then, all references to facilities crossing at "various angles and depth" in the gas sections shall mean that such facilities are crossing sewer, water, catch basin and, catch basin chute, and other excavations at a ninety (90) degree angle to the proposed sheeting line or side of excavation (for unsheeted trenches) with an allowable deviation of forty-five (45) degrees in any direction, except for catch basin chute excavation where the allowable deviation shall be sixty (60) degrees. Where the cover is not noted or specified, the bottom face of such facilities shall be assumed to be crossing catch basin chutes at a depth of three (3) foot eight (8) inches or less from the street surface. Paragraph No. 2 above shall apply in cases of distribution water main construction. Appropriate bid items and specifications are provided for cases where angle and depth are greater than stated above. This section also applies to work defined in "Emergency Reconstruction Contracts" or so-called "Where and When Contracts". These contracts are not pre-engineered and consequently have no drawings, sketches or determined locations and so, gas facilities encountered will be crossing existing and proposed sewer, water, catch basin/catch basin chutes and all appurtenances at various angles and depths.

14. Maintenance Of Traffic For Gas Work:

All work pertaining to gas bid items and specifications shall be performed within the contract maintenance of traffic plan as specified in the contract document. The bid price for the Maintenance and Protection of Traffic shall cover all work pertaining to gas items. The City shall make compensation for additional maintenance and protection of traffic items in connection with gas item of work only when such additional work is deemed reasonable and necessary by the Resident Engineer and is approved by him prior to its performance.

15. Relocated Gas And Temporary Systems Installation:

In cases where the Contractor is allowed to select the location for temporary construction such as, installation of dewatering headers, wells, well points, etc., he shall not disturb any gas facilities shown on sketches provided in this section. The only exception shall be, if the affected gas company agrees to such relocation and provided that the cost of such relocation is a matter of adjustment between the company and Contractor, and at no cost to the City.

16. Role Of Company Inspector:

In any case in which the City elects to perform some or all support and protection work with its own employees, personnel or contractors, the facility operator shall provide onsite inspectors to approve and certify such support and protection work (exclusive of City accommodations) performed by the City's own employees, personnel, and contractors. Facility operator's inspectors are not authorized to direct City contractor during the performance of contract work. They shall act through the City Resident Engineer and provide him/her required approvals and certifications, prior to preparing partial payments of EP-7 items, in a format and frequency to be prescribed by the appropriate City Head of Construction.

17. Coordination With Gas Company:

The Contractor shall be required to notify the gas company(ies), in writing, at least two (2) weeks prior to the start of final paving in order to allow companies to complete any unfinished gas work located within the area to be paved. Every effort shall be made to maintain gas service with minimum inconvenience to the public.

III - TECHNICAL SECTION

SECTION 6.01 - Trench Crossings; Support And Protection Of Gas Facilities And Services.

1. Description:

Under this section, the Contractor shall provide all labor, materials, equipment, and incidentals required to support and/or protect the integrity of gas mains, services and appurtenances of any sizes, configurations, and operating pressures crossing trench excavations above subgrade for planned construction of sewers and water mains facilities. A gas service shall be defined as a gas pipe of three (3) inches in diameter or less branching from the main to a customer pick up point or property valve box. A gas main may be any size pipe that is part of a distribution or transmission network other than services described above. Crossings shall be defined as gas facilities spanning the width of excavation (one side to the other side). These crossings may be at various angles and depth as shown on "Gas Cost Sharing Work Standard Sketches Nos. 1 and 1A", and as specified in "General Provisions; Gas Cost Sharing Work Paragraph No. 13" and, at the locations shown or listed in contract documents. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with contract specifications, plans, and at the directions of the Resident Engineer in consultation with the authorized representatives of the facility operator.

2. Method Of Construction:

- A. Protection: In general, the gas facilities shall be protected as required by New York State Industrial Code 753. In particular, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) directly below the pavement base to expose the gas facilities (marked out by facility operators) and to ascertain the clearances and cover of the facilities with respect to the proposed excavation. Upon exposing the affected facilities sufficiently, at the discretion of the Resident Engineer, to ascertain the foregoing, Contractor shall be permitted to proceed with a combination of hand and machine excavation, as appropriate, outside a zone of protection whose limit shall be defined as a perimeter located twelve (12) inches from the outside face of each gas facility crossings (See "Gas Cost Sharing Work Standard Sketch No. 2"). If the facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained, and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07, and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".
- B. Support: Gas mains or services crossing excavations equal or less than four (4) feet wide are generally self supporting, unless field conditions as determined by the Resident Engineer require otherwise. The support requirements for gas mains and services crossing excavations greater than four (4) feet wide shall be as shown on the attached "Gas Cost Sharing Work Standard Sketch No. 1" and Contractor shall use sheeting methods that permit the maintenance of gas facilities in their existing locations and configurations. Alternate methods equivalent to those shown on the sketch or accommodations by the facility operator proposed by the Contractor in order to facilitate the execution of the specified work shall be allowable, provided that prior approval is obtained by the Contractor from the Engineer and the facility operator. The support and protection of gas facilities crossings shown on plans, drawings, listings or otherwise identified in this contract shall not be circumvented with the issuance of so called "order outs".

3. Method Of Measurement:

The Contractor shall be paid for supporting and/or protecting gas facilities crossing trench excavations under the appropriate bid items covered by this section. The Contractor shall be directly responsible to the facility operator for the total cost of using any alternate method requiring the use of resources owned by the facility operator. Regardless of the method used, the City shall pay the bid price for the appropriate support and/or protect item of work. The average rate charged by the facility operator for alternate support and protection work such as, disconnecting and reconnecting gas services is listed in attached "Schedule GCS-A".

4. Payment Restrictions:

This item shall not be paid for: gas services crossing unsheeted water main trench excavation; abandoned gas main/services identified by facility operator; gas mains/services crossing trench excavations for fire hydrant branch connections pipes, catch basins and/or chutes (sewer drain pipe), house sewer and/or water services; gas facilities encroaching any face of excavation for sewer and/or water construction, all of which are covered under other contract sections. Also this item shall not be paid for new gas mains and services crossing water trenches when trenching for such new facilities has been performed by the Contractor in common with trench excavation for City work (overlapping trench limits). The cost of supporting and protecting such gas facilities crossings shall be deemed included in the cost of trench excavation for the new gas facilities. This payment restriction shall apply even if such common trench gas excavation is not part of the contract. The prices bid for items covered by this section represent full compensation to Contractor to completely perform the work described. No other bid items shall be combined with these items in order to pay for gas main and/or services crossing excavations specified herein.

5. Method Of Payment:

Each (Ea.) gas facility crossing trench excavation as described in these specifications shall be counted for payment.

6. Price To Cover:

The cost of timber/steel supports installed for gas facilities shall be included in the bid price. The bid price for each crossing shall also cover all additional supervision, labor, material (except those provided by the facility operator), equipment and insurance necessary to completely maintain the gas facilities without disruption of service to the customers and in accordance with contract plans, specifications and facility operator standards. The price shall also include: changes of method of operations; sheeting modifications where necessary to accommodate the gas facilities crossings; installation and removal of water pipe under gas facilities (so called "snaking"); extra care during excavation (including hand excavation under existing single and multiple gas facilities); extra backfilling and compaction around, over and under gas facilities; installation and removal of sheeting around gas facilities; associated maintenance and protection of traffic; barricades; and traffic plates that may be required to temporarily close and/or complete the work.

SECTION 6.02 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Gas Interferences.

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance, and incidentals for the extra excavation associated with the installation of catch basin sewer drain pipes (chute) under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents and also, for the support and protection of these facilities during associated excavation and backfill operations. The gas company operating in the area, (facility operator), owns these facilities.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation is required when catch basin sewer drain pipes are installed at an upstream invert depth lower than four (4) feet (up to a maximum of six (6) feet) from the proposed pavement grade because the bottom faces of interfering gas mains and appurtenances are located at a depth greater than three (3) foot eight (8) inches from proposed pavement surface (See "Gas Cost Sharing Work Standard Sketch No. 4").

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered starting from catch basin structure proper and that prevents the installation of the chute connection at an upstream cover less than or equal to three (3) feet or any other minimum cover required to avoid City facilities (e.g. water, sewer, etc.) as directed by the Resident Engineer.

4. Payment Restrictions:

This item shall not apply and related bid item shall not be paid in cases where:

- A. Upstream invert chute is more than six (6) feet deep because of gas facilities.
- B. Chute cannot be installed above existing gas facilities because of interferences with other private facilities that are not otherwise covered under this contract, regardless of upstream invert depth.

The above cases shall be at no cost to the City, but shall be a matter of adjustment between the Contractor and the facility operator(s).

5. Price To Cover:

The bid price shall cover the additional cost of all additional supervision, labor, materials, equipment and insurance, to complete the installation of catch basins and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities; backfilling and all other items necessary to perform all work incidental thereto including: installation and removal of drain pipe under gas facilities ("snaking"); widening of trenches to facilitate the above work; subsequent additional backfill and pavement restoration; modifying precast catch basin window to accommodate connection; changing sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to temporarily close and/or complete the work. The price shall not include removal of ledge rock and/or excavation of boulders in open cut.

SECTION 6.02.1 - Extra Excavation For The Installation Of Catch Basin Sewer Drain Pipes With Upstream Inverts Greater Than Six (6) Feet.

1. Description:

Under this item, the Contractor shall provide all labor, materials, equipment, insurance and incidentals for the extra excavation of catch basin chutes where the upstream invert is greater than six (6) feet under gas facilities of various sizes crossing the trench excavation at various angles and depth at the locations shown in the contract documents or as determined by field conditions and also, for the support and protection of these facilities during the associated excavation, sheeting and backfilling operations.

2. Method Of Measurement:

The bid price shall be per location (Each) where extra excavation and sheeting is required when the catch basin chute installed at an upstream invert depth lower than six (6) feet from the proposed pavement grade because the bottom faces of the interfering gas mains and appurtenances are located at a greater depth than three foot eight inches from the proposed pavement surface only.

3. Method Of Construction:

Incremental cost responsibility for chute excavation is determined by the first private facility encountered during such excavation when initiated from catch basin structure and that prevents the installation of the chute at an upstream cover less than or equal to three (3) feet or any other cover required to avoid City facilities as directed by the Resident Engineer.

4. Payment Restriction:

This item shall not apply and related bid item shall not be paid in cases where:

Upstream invert chute is less than or equal to six (6) feet deep because of gas facilities. Section 6.02 shall be paid.

5. Price To Cover:

The bid price shall cover the additional cost of all supervision, labor, materials, equipment and insurance to complete the installation of catch basin and associated sewer connections in accordance with the contract plans and specifications. The price shall include: excavation by hand around and under single and multiple gas facilities; locating, supporting and protecting gas facilities incidental thereto; widening of trenches to facilitate the above work; subsequent additional backfilling and pavement restoration; modifying pre-cast basin window to accommodate connection; the installation of catch basin with deeper sumps as specified; additional sheeting and changes in sheeting method and configuration to accommodate gas facility crossings; maintenance and protection of traffic; barricades; and installation of traffic plates that may be required to Temporarily close and/or complete the work.

SECTION 6.03 - Removal Of Abandoned Gas Facilities. All Sizes.

1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services, or appurtenances thereof, located within the street shown on the contract plans, owned by gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work.

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any resulting from this choice shall be a matter of adjustment between the Contractor and facility operator only, and at no cost to the City.

3. Restrictions:

The facility operator shall be solely responsible for its contaminated gas facilities, surrounding contaminated soil and their disposal and abatement procedures, unless contract bid items are applicable and provided for such work. In such cases, the quantity removed shall be charged to EP-7 bid item "UTL-GCS-2WS - GAS INTERFERENCES AND ACCOMMODATIONS" at the City bid prices.

4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment, and insurance necessary to complete this work in accordance with the contract plans and specifications, including excavation by hand around and under other City and facility operator owned properties and, where necessary, support and protection of such properties. The price shall also cover breaking, cutting, and/or burning of abandoned gas pipes and their disposal from the site; sealing open ends remaining in the excavation with concrete or caps (caps to be provided by the facility operator) and backfilling of the area where the pipeline has been removed with clean backfill. The price shall also include any required dump charges. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and restoration associated with abandoned gas facilities removal, all of which are covered under Section 6.06.

**SECTION 6.03.1 - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap.
All Sizes. (For National Grid Work Only)**

1. Description:

Under this section the Contractor shall provide all labor, materials, equipment, insurance and, incidentals required for the removal of abandoned gas mains, services or appurtenances thereof, located within the

street shown on the contract plans, owned by the gas company operating in the project area (facility operator), used or to be used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural or manufactured or mixture of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distributing or furnishing of gas in enclosed containers. Such removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap and so, may require special handling and disposal methods as specified in National Grid Standard Operating Procedure 12-2, Coal Tar Wrap Handling and 12NYCRR56.

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and, the Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities to be removed by the Contractor. However, the facility operator may prefer to make this test during performance of City work, in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost to the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Wrap then the removal of said facilities shall be covered under separate item (See Section 6.03).

3. Requirements:

The City Contractor shall excavate abandoned gas facility sufficiently, either in its entirety, or at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or City structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractor's trench by authorized National Grid personnel who will remove the Coal Tar Wrap as per National Grid procedures. This work by National Grid personnel shall be performed in a timely fashion and shall not unduly impede the Contractor's progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. The Contractor at a site designated by the Contractor shall stockpile the removed pipe. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes during off hours or during such time as agreed to by the Contractor. Since the pipe removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

4. Method Of Measurement:

Abandoned gas pipeline removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the contract plans and specifications, including excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance and protection of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be provided by the facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This

item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor's excavation method, additional trucking and/or stockpiling costs.

SECTION 6.03.1a - Removal Of Abandoned Gas Facilities With Possible Coal Tar Wrap. All Sizes. (For Con Edison Work Only)

1. Description:

Under this section the Contractor shall provide all labor, material, equipment, insurance and, incidentals required to prepare abandoned gas mains, services and appurtenances thereof located within the street shown on contract plans, owned by the gas company operating in the project area (facility operator), for removal due to interference with proposed City work. These abandoned gas facilities were, at one time, used for or in connection with or to facilitate the conveying, transportation, distribution or furnishing of gas (natural, manufactured or a combination of both) for light, heat, or power, but does not include property used solely for or in connection with business of selling, distribution or furnishing of gas in enclosed containers. Such preparation for removal shall include only abandoned gas facilities that interfere with (i.e. cause additional work) City work. These gas facilities may be coated with Coal Tar Wrap which may contain asbestos or PCB's and so, may require special handling and disposal methods as specified in Con Edison - ASBESTOS MANAGEMENT MANUAL, CHAPTER 6 - ASBESTOS WORK PROCEDURES, SECTION 06.04 - COAL TAR WRAP REMOVAL. For under 25' (feet) in length and an approved NYC-DEP variance for over 25' (feet).

2. Determination Of Operating Status Of Gas Facilities:

The Contractor shall notify facility operator, as required by New York State Industrial Code 753. Gas Facilities shall not be removed without the approval of the facility operator whose authorized representative shall certify in writing (specific facility or area wide facilities certification) and in a timely manner acceptable to the Resident Engineer that abandoned facilities are free of combustible gas and any other environmental contaminants prior to removal. The Resident Engineer shall rely on the facility operator's certification. The facility operator may request the excavation of test pits (See Section 6.07) for this determination ahead of City work and Contractor shall provide safe access, facilitate and permit facility operator to enter test pit excavations for the purpose of testing gas facilities. However, the facility operator may prefer to make this test during performance of City work in order to issue the above certification. This shall be permitted provided that it is agreed that additional costs, if any, resulting from this choice shall be a matter of adjustment between the Contractor and the facility operator only, and at no cost the City contract. Should such investigation result in the determination that the abandoned gas facilities do not contain Coal Tar Warp then the removal of said facilities shall be covered under separate item (See Section 6.03).

3. Requirements:

The Contractor shall excavate abandoned gas facility sufficiently, either in it's entirety, of at locations determined by Contractor to allow the removal of Coal Tar Wrap (if present on the abandoned gas facility) and to facilitate the safe extraction of manageable lengths of abandoned pipe without damage to adjacent facilities, utilities or city structures either parallel to or crossing above or below abandoned gas facility. The Contractor is to allow access to the designated cutting points within the Contractors trench by authorized Con Edison personnel who will remove the Coal Tar Wrap as per Con Edison and/or NYC-DEP approved procedures. This access shall conform to all applicable codes, rules & regulations. This work by Con Edison personnel shall be performed in a timely fashion and shall not unduly impede the Contractors progress and/or productivity. Upon completion of the coating removal, the Contractor shall be allowed to cut, burn or grind the gas facility and remove the section of abandoned pipe. Contractor shall designate a specific site to stockpile those removed pipes. The facility operator will be responsible to provide trucking and disposal services with its own personnel and shall remove the stockpiled pipes

during off hours or during such time as agreed to by the Contractor. Since the pipe removed will remain the property of the facility operator and is to be disposed of by the facility operator, the facility operator shall be responsible for any required notifications, filings, dump charges and incidentals associated with the disposal of abandoned gas facilities found to contain Coal Tar Wrap.

4. Method Of Measurement:

Abandoned gas facility removal shall be measured for payment per linear foot of pipe and appurtenances removed.

5. Price To Cover:

The price shall cover all additional cost of supervision, labor, materials, equipment and insurance necessary to complete this work in accordance with the plans and specifications, including, but not limited to, excavation by hand around and under other City and facility operator owned properties and, where necessary, the support and protection of such properties. The cost shall also include hand excavation in the area(s) of proposed abandoned pipe cut(s), cutting and/or burning of abandoned gas pipes and stockpile of removed sections of abandoned pipe and associated maintenance of traffic, blocking and temporary fencing if required. The unit price shall also cover sealing open ends remaining in the excavation with concrete or end caps (end caps to be supplied by facility operator) and backfilling of the area where the abandoned pipeline has been removed with clean backfill material. This item does not include any type of extra excavation, backfilling, compaction, pavement removal and/or restoration (temporary and permanent) associated with abandoned pipe removal ("lost trench"), all of which are covered under separate Section 6.06. The price shall also include allowance for any loss of productivity by the Contractor due to required facility operator work to remove pipe coating and prepare pipe for cutting as well as any change in Contractor excavation method, additional trucking and/or stockpiling costs.

SECTION 6.04 - Adjust Hardware To Grade Using Spacer Rings/Adaptors. (Street Repaving.)

1. Description:

Under this section, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to final grade gas street surface hardware located within the contract area boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in concurrence with authorized representative of the facility operator.

2. Materials:

The facility operator shall furnish and deliver all prefabricated hardware parts required. These include adaptors for the grade adjustment proper and new street hardware if existing ones are found to be defective, all in accordance with the facility operator standards and City rules and regulations. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

3. Method Of Measurement:

The Contractor shall be paid for each six (6) inch round box and/or nine (9) inch square box adjusted to grade regardless of adjustment height requirements.

4. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and material (except those to be provided by the facility operator), required to adjust each box to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities to be salvaged and returned to the facility operator and, all material transportation from the Contractor's material storage yard to the work site. In addition the bid price shall include "chipping" around existing box using appropriate means and methods where grinding is required.

SECTION 6.05 - Adjust Hardware To Grade By Resetting. (Road Reconstruction.)

1. Description:

Under this item, the Contractor shall provide all labor, supervision, materials, equipment, insurance and incidentals required to adjust to the proposed grade gas street surface hardware located within the contract area boundaries shown on the plans. The gas company operating in the area, (facility operator), owns these facilities. The work shall consist of either building up or lowering or resetting the casting by removing the existing frame and cover building up or decreasing the existing installation, replacing the frame and/or cover if damaged or worn out, as determined by the Resident Engineer, with a new frame and/or cover furnished by the owner, and setting the frame and cover to new elevation. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer.

2. Materials:

The facility operator shall furnish and deliver all new hardware parts required. The Contractor shall furnish materials such as mortar, bricks and concrete in compliance with contract requirements. At locations where high-early strength concrete is required under this contract to be placed adjacent to gas facilities, then the requirement for concrete shall be high-early strength complying with the current New York State Department of Transportation, Standard Specifications for Class F concrete. Existing castings may be replaced as required and deemed necessary by the Engineer and by City rules and regulations. The Contractor shall install the new castings of various sizes furnished by the facility operator. The Contractor shall notify the facility operator of the installation schedule at least three (3) business days before materials are required on the site and, shall provide off-loading services to the facility operator. Should the facility operator fail to deliver the necessary material according to any schedule mutually agreed upon by the Contractor and facility operator, the City shall not be responsible for any delays attributable thereto, nor for the failure of delivery of such materials. Such delays shall be a matter of adjustment between the Contractor and the facility operator. On project where material storage is not permitted on site, the facility operator shall deliver the required material to the Contractor's yard and it shall be the Contractor's responsibility to transport the material to the work site when needed for installation. It shall also be the Contractor's responsibility to inspect the materials to be installed by him, immediately upon delivery and advise the facility operator through its authorized representative, of all damaged materials. The Contractor at no additional expense to the City or the facility operator shall replace any material that is damaged or lost after the Contractor's inspection.

3. Methods Of Construction:

The Contractor shall remove and reinstall existing castings or install new castings to the proposed grade. Setting and resetting the castings shall be done with mortar and brick according to the standards of the facility operator. Work shall be performed in a workmanlike manner. Castings that are deemed unacceptable for resetting shall remain the property of the facility operator and he shall be responsible for their removal and proper disposal from site. No traffic shall be allowed on adjusted street hardware until permitted by the Engineer.

4. Method Of Measurement:

The Contractor shall be paid for each gas hardware adjusted to grade regardless of size or adjustment height requirements (up or down).

5. Price To Cover:

The unit price bid for this item shall include all additional labor, supervision, insurance, equipment and material (except those to be provided by the facility operator), required to adjust each gas hardware to grade as required in the contract plans and specifications. The bid price shall also include the removal of existing frames and covers from existing facilities; building up the existing installations with bricks and mortar, or lowering the existing installation by removing bricks and mortar; replacing damaged frames and/or covers with new frames and/or covers furnished by the facility operator; setting the frames and covers to the new elevations; protect existing installations; repair minor structural damages to existing installations prior to resetting frames; unloading of furnished castings at the Contractor's yard and transporting castings from the Contractor's yard to the job site as required; completing the work in accordance with the contract plans, specifications and, at the directions of the Engineer. In addition the bid price shall include "chipping" around existing gas facilities using appropriate means and methods where grinding is required.

SECTION 6.06 - Special Care Excavation And Backfilling.

1. Description:

Under this section, the Contractor shall provide all labor, materials, equipment, insurance and incidentals required to support and protect the integrity of live gas facilities including mains, services, related structures and appurtenances during excavations. The gas company operating in the area, (facility operator), owns these facilities. The work shall be performed in accordance with the contract plans, specifications and at the directions of the Resident Engineer in consultation with authorized representatives of the facility operator.

2. Applicability Of Section:

This section shall apply to live gas facilities of various sizes located within two (2) feet of any face of unsheeted excavation, (unsheeted excavation refers to any excavation performed for city work and includes excavations performed that are to be subsequently sheeted using approved methods) and paralleling or, encroaching any face of excavation. Also, for crossings greater than forty-five (45) degrees and/or located at a cover depth greater than five (5) feet from existing street surface. Parallel facilities are not exposed at any time during excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). Encroaching facilities are partially exposed inside the limit of excavation (See "Gas Cost Sharing Work Standard Sketch No. 5"). This section shall also apply to gas facilities crossing catch basins excavation, and catch basins sewer connections (chutes) trench excavation only when extra depth (covered in other section), is not required for chutes installations because of such utilities interferences (See "Gas Cost Sharing Work Standard Sketch No. 3"). This section shall also apply to gas services (if shown or otherwise listed in contract documents) crossing unsheeted excavations for water mains, gas facilities crossing fire hydrant branch connections, house sewer and/or water service connections excavations. This section shall also apply for so called "loss trench", as described further, and for additional excavation (pavement and/or soil), backfilling, compaction, roadway base and pavement restoration due to abandoned gas facilities, only if removed by Contractor. If operating status of gas facilities cannot be determined prior to excavation then such facilities shall be considered live and this section shall fully apply. The excavation around fully exposed live gas facilities along and within limits of excavation (not crossings) shall be covered by this section also (not shown on "Gas Cost Sharing Work Standard Sketch No. 5"), however the support requirement, if any is required, of such facilities is beyond the scope of these specifications and therefore shall be the responsibility of facility operator to determine and prescribe, at no cost to the City contract, but shall be a matter of adjustment between the Contractor and facility operator.

3. Payment Restriction:

No special care excavation shall be paid for abandoned gas facilities paralleling and/or encroaching excavation and therefore are not in direct interference with City work. Except as allowed in this section, the bid item specified under this section shall not be used in combination with items covered under other

sections for work done due to a particular gas facility. This item shall not be paid for new gas facilities when trenching for such new facilities has been performed by the Contractor of record in common with trench excavation for City Work (overlapping trench limits). The cost of excavating with care as defined in this section shall be deemed included in the cost of trench excavation for the new gas facilities. This restriction shall apply even if such gas common trench excavation is not part of the contract. If facilities are in direct interference with City work, meaning that "Minimum Clearances" described in "General Provisions; Gas Cost Sharing Work Paragraph No. 8" cannot be maintained and excavation has to be temporarily or permanently abandoned then this particular location shall become a test pit and dealt with as specified in Section 6.07 and "General Provisions; Gas Cost Sharing Work Paragraphs Nos. 2 and 8".

4. Method Of Construction:

All excavation in the vicinity of gas facilities shall be as required by NYS Industrial Code 753. Where these facilities are paralleling and located two (2) feet or less from the limits of the proposed excavation, the Contractor shall use hand excavation methods (pick and shovel or hand held power tools) to ascertain the clearances of these facilities with respect to the proposed excavation. Once the location of these facilities with respect to the proposed excavation is verified to the satisfaction of the Resident Engineer, the Contractor shall then proceed with a combination of hand and machine excavation as required preserving the integrity of the facilities. The installation of timber supports or underpinning, when soil foundation cannot fully support partially exposed pipes, may be required to prevent pipe movement as directed by the Resident Engineer.

5. Method Of Payment:

The unit price for this work item shall be based on cubic yard (CY) of average excavation with care and, is to be considered as an incremental cost for performing City work with gas facilities interferences.

6. Method Of Measurement:

- A. For Paralleling Facilities: Volume calculated as: Depth as measured from existing street surface to the bottom of unsheeted trench excavation allowable by OSHA regulations, multiplied by, the width measured as one (1) foot from the face of excavation toward the center of excavation, multiplied by the length of parallel facility, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5"). The gas facility is no longer considered to be in interference once sheeting has been installed, therefore no further compensation for paralleling facilities as described above will be made.
- B. For Encroaching Facilities: Volume calculated as: Depth of trench excavation multiplied by, the width of partially exposed pipe plus one (1) foot, multiplied by the length of facility encroachment, divided by twenty-seven (27) cubic feet per cubic yard (See "Gas Cost Sharing Work Standard Sketch No. 5").
- C. Fully Exposed Gas Facilities: (Not shown on "Gas Cost Sharing Work Standard Sketch No. 5") along and inside trench and/or crossing trench at an angle greater than forty-five (45) degrees and/or a cover depth greater than five (5) feet from the existing street surface. The volume shall be measured as the depth of trench excavation multiplied by the distance measured along the sheeting line between two (2) points of intersections of the gas facilities and the sides of trench excavation, multiplied by the width of trench excavation.
- D. For Additional Excavation And Restoration Due To So Called "Loss Trench", When The Integrity Of Pavement And Soil Above And Around Existing Live Gas Facilities Cannot Be Maintained Due To Its Lack Of Cohesiveness: Volume shall be calculated as: Depth of unsheeted trench excavation multiplied by width measured as distance of facility from closest edge of unsheeted excavation plus, width of facility proper plus, one (1) foot or a maximum width of three (3) feet multiplied by length of facility fully exposed divided by, twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").
- E. For Facilities Crossing Excavation For Catch Basins, Or Chutes Installations (When NYCDEP Funded) Or Fire Hydrant Branch Connections, Or Unsheeted Water Main Trench, Or House Sewer And/Or Water Services: Volume calculated as: Depth as defined above multiplied by, the width taken as the outside diameter of pipe or the width of structure plus one (1) foot on either side (two (2)

feet), multiplied by, the length of exposed facility crossing the trench, divided by twenty-seven (27) cubic feet per cubic yard (not shown on "Gas Cost Sharing Work Standard Sketch No. 5").

Overlapping volume dimensions measured as described above may occur when multiple facilities are paralleling excavations, encroaching excavations or crossing catch basins and catch basin chute installations. In such cases, all such facilities shall be counted as one limited by the extreme pipes, faces (See "Gas Cost Sharing Work Standard Sketch No. 2"). The volume shall then be calculated as described above.

7. Price To Cover:

The bid price shall also cover all additional supervision, labor, material, equipment and insurance necessary to excavate while protecting and maintaining (excluding supports for fully exposed live gas) gas facilities without disruption of service to the public and in accordance with contract specifications. The price shall also include, changes of sheeting method and excavation width configuration where necessary to accommodate gas facilities in their existing locations; difficulties during the installation of catch basins, chute connections, hydrant branch, and house sewer and water connections under or over gas facilities; loss of productivity due to slower rate of excavation (special care) during excavation, including the use of such methods as: hand excavation around existing single and multiple facilities, extra excavation and backfilling due to lost trench because of existing and adjacent gas facilities, compaction, removal of sheeting from the facilities, extra roadway base restoration and temporary pavement, associated maintenance and protection of traffic, barricades, and traffic plates that may be required to temporarily close and/or complete the work.

SECTION 6.07 - Test Pits For Gas Facilities.

1. Description:

Under this section, the Contractor shall furnish all labor, materials, insurance, equipment and appliances necessary to excavate, sheet and, maintain test pits at locations approved by the Resident Engineer in consultation with the facility operator. Test pits shall be dug in order to ascertain exact locations, cover and invert elevations, clearances, alignment and operating status (live or dead) of existing gas facilities. The Contractor shall inspect jointly with the Resident Engineer and facility operator, gas facilities and other structures uncovered, take all relevant measurements and elevations as directed by the Resident Engineer. Tests to determine operating status of gas facilities shall be performed by facility operator. The pits shall be covered with steel plates during daytime nonworking hours, and uncovered, as required, until the inspection work is completed. Testing of gas facilities may require a maximum of four (4) hours. Then, the pits shall be backfilled with clean fill, and resurfaced with temporary pavement. All traffic shall be maintained and all safety measures as stipulated shall be complied with.

2. Methods Of Construction:

- A. Excavation: Existing pavement to be removed shall be neatly cut along lines of removal with a saw or other approved equipment which leaves a neat straight joint line along the juncture with subsequently replaced pavement. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. Use of hand operated pneumatic and electric jackhammers will be permitted only for breaking pavement and removal of masonry, concrete and boulders, or as otherwise directed by the Resident Engineer. The Contractor shall properly dispose of all materials excavated from test pits away from site. Test pits shall be excavated at locations shown on the contract drawings or as directed by the Resident Engineer. Additional test pits may be required and shall be excavated where required, as ordered by the Resident Engineer. All test pits shall be excavated to a depth and size necessary to locate the existing facilities. Shheeting shall be used when depth of excavation exceeds five (5) feet. The sheeting required shall be furnished and installed in full compliance with the State of New York and Federal Safety Codes requirements and as specified in contract, whichever is more stringent. Care shall be taken that no existing gas facilities or other structures are broken or damaged. All broken or damaged facilities shall be reported immediately to facility operator who shall decide whether such facilities shall be repaired or replaced by company forces or by City contractor and in conformance with "General Provisions; Gas Cost Sharing Work Paragraph No. 9". Contractor shall excavate all material encountered, including

large masses of concrete, cemented masonry and boulders, as directed by the Resident Engineer. Any type of excavation protection used, shall satisfy the following:

- (a) Industrial Code Rule 753.
- (b) Prevent injury to workers and the public, and avoid damage to existing water, sewer, and gas pipes or other structures, and to pavements and their foundations, through caving or sliding of the banks of the excavation.

Should it become necessary, as determined by the Resident Engineer, to enlarge any test pit in any dimension after sheeting has been placed, the Contractor shall remove portions of the sheeting, as necessary, enlarge the test pits as directed, and replace the sheeting without additional compensation for this work other than for the additional volume of material excavated.

- B. **Maintenance Of Test Pits:** Excavated test pits shall be maintained free of debris and kept dry by the Contractor in order to permit the inspection and measurements and to determine the locations of facilities. In order to accomplish this, Contractor shall, upon completion of excavation and placement of sheeting (if depth greater than five (5) feet), furnish and install adequate steel plates and posting over the excavated pits and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during nonworking hours. The Contractor shall then, at no additional cost, relocate such barricades, barrels, cones and other warning devices and remove steel plates, as and when directed by the Resident Engineer to facilitate the inspection of exposed facilities. When work is being performed and the pits are not covered with steel plates, the Contractor shall provide complete and safe access to the test pits as may be required, and he shall provide construction barricades and maintain traffic at all times as shown or as directed by the Resident Engineer. Upon completion of test pit inspection by the Resident Engineer, the pit shall be backfilled by the Contractor as specified in contract, except that backfill material shall conform to contract specifications for such purpose.
- C. **Pavement And Sidewalk Restoration:** After backfilling is completed, the Contractor shall construct a temporary pavement consisting of a minimum of four (4) inches thick asphaltic concrete mixture in roadway areas or a two (2) inches thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent pavement and sidewalk replacement is constructed as specified in contract.

3. Measurements:

The quantity to be measured for payment shall be the number of cubic yards of material removed from within the limits of the pit dimensions as directed by the Resident Engineer. The volume occupied by existing pipes or other structures remaining within the maximum payment lines will not be deducted from the total volume measured except, where the cross sectional area of these facilities exceeds four (4) square feet. As determined by the Resident Engineer, the quantity measured for payment may be proportionate to a fair and reasonable estimate of gas responsibility in the total volume excavated.

4. Price To Cover:

The contract price bid per cubic yard for test pits shall cover all additional costs of labor, material, insurance, equipment, appliances and incidentals required to excavate test pits, including removal and disposal of excavated materials, sheeting, steel plating, backfill, compaction and temporary pavement and sidewalk restoration all in accordance with the specifications and as direction of the Resident Engineer. The price shall also include the cost of providing safe access to the excavation by facility operator for the performance of certain test to determine operating status of gas facilities prior to City work. The price shall also include support and protection of all gas facilities crossing excavation, paralleling and/or encroaching any face of excavation.

GAS COST SHARING STANDARD SPECIFICATIONS
SCHEDULE GCS-A

Average rate charged by utility companies to Disconnect and Reconnect Gas Services:

- 1. National Grid - \$586.90 per Service/and Visit
- 2. Con Edison - \$524.00 per Service/and Visit

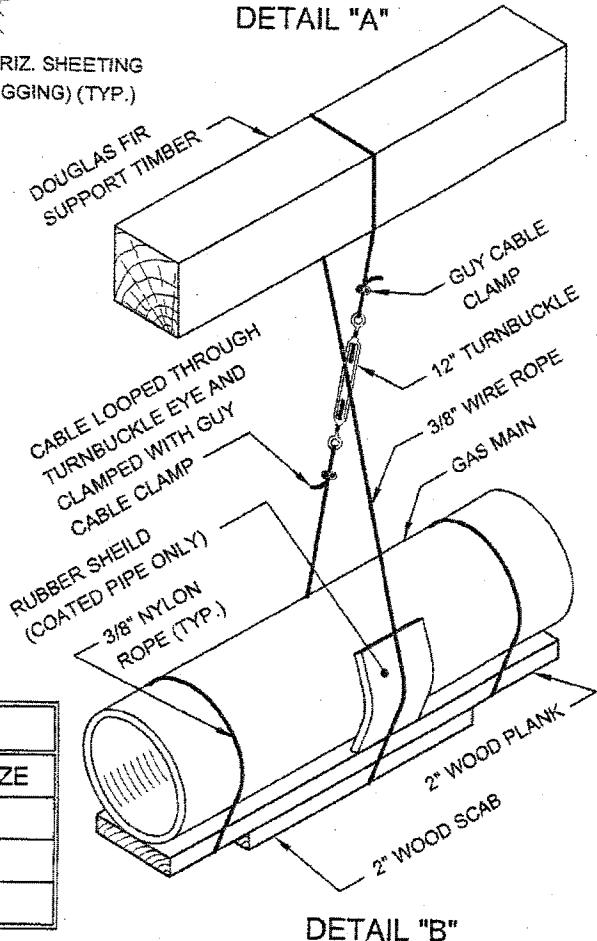
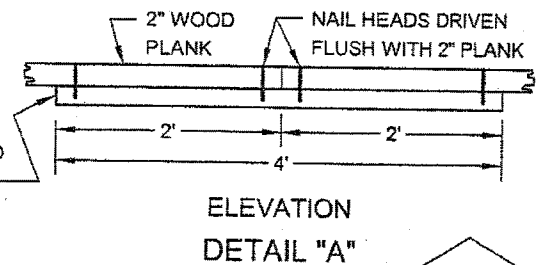
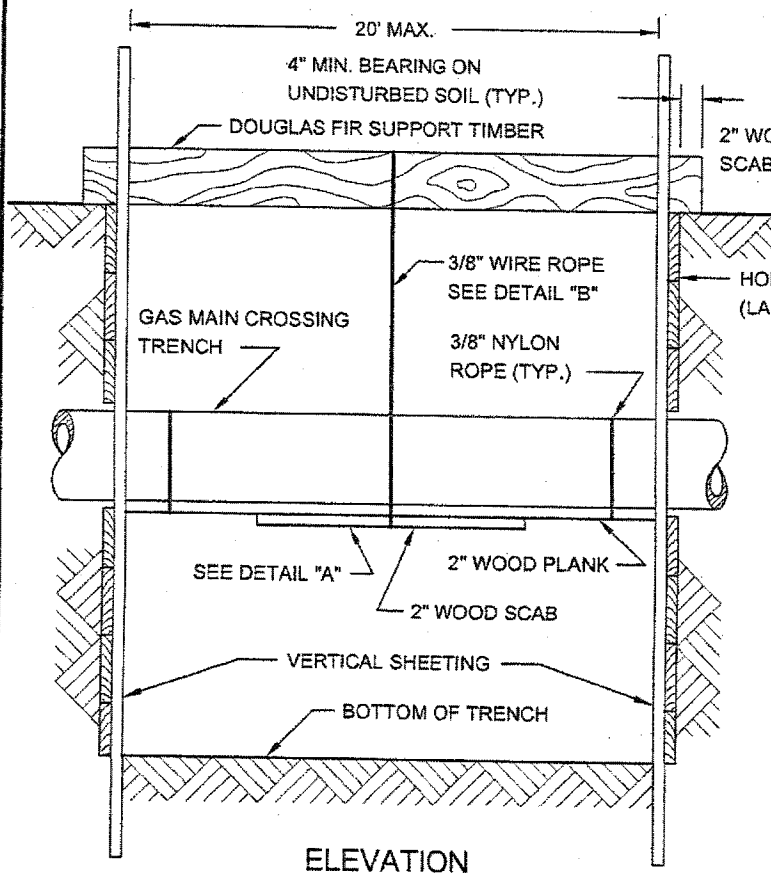
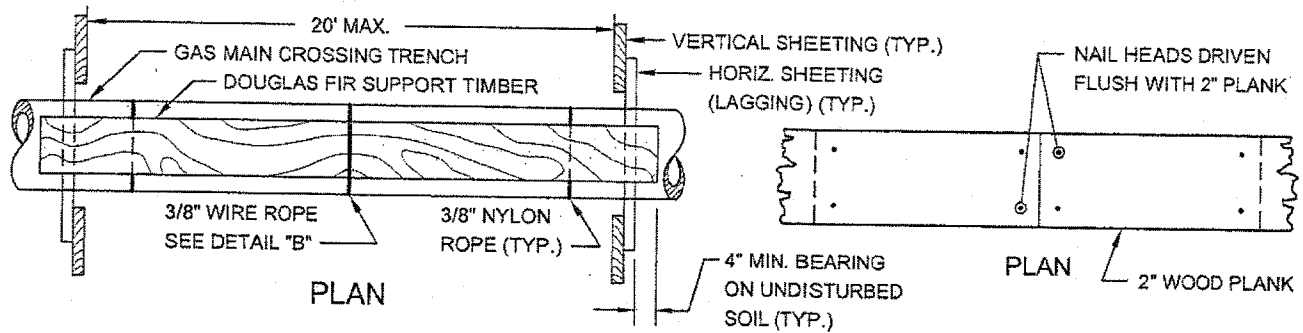
IV - STANDARD SKETCHES; GAS COST SHARING WORK

Hereinafter attached are the following Standard Sketches for Gas Cost Sharing Work:

- Sketch No. 1 - Support Requirements For Gas Mains And Services Crossing Excavation Greater Than 4' - 0" Wide At Any Angle
- Sketch No. 1A - Support Requirements For Gas Mains Over 16" Diameter Up To And Including 48" Diameter Crossing Excavation At Any Angle
- Sketch No. 2 - Typical Methods Of Measurement For Gas Crossings
- Sketch No. 3 - Utility Crossings During Catch Basin Chute Connection Pipe Installation
- Sketch No. 4 - Utility Crossings During Catch Basin Chute Connection Pipe Installation (Extra Depth)
- Sketch No. 5 - Gas Main Encroachment On And/Or Parallel To Excavation Of Unsheeted Trench

GAS COST SHARING WORK (SKETCH NO. 1)

SUPPORT REQUIREMENTS FOR GAS MAINS AND SERVICES CROSSING EXCAVATION GREATER THAN 4'-0" WIDE AT ANY ANGLE

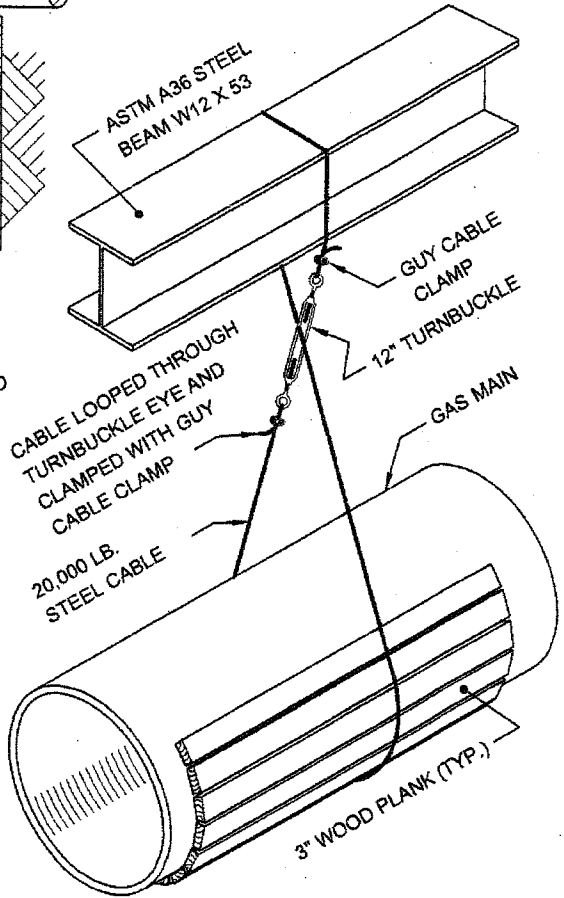
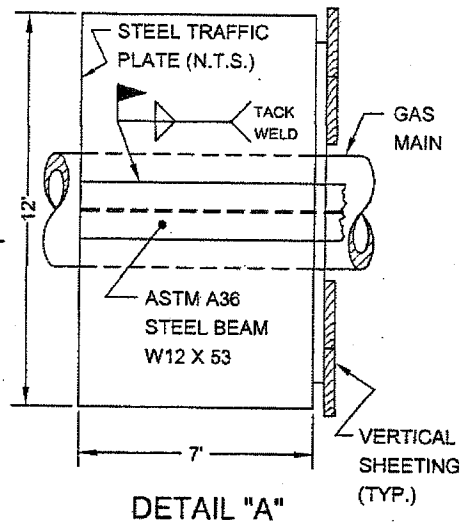
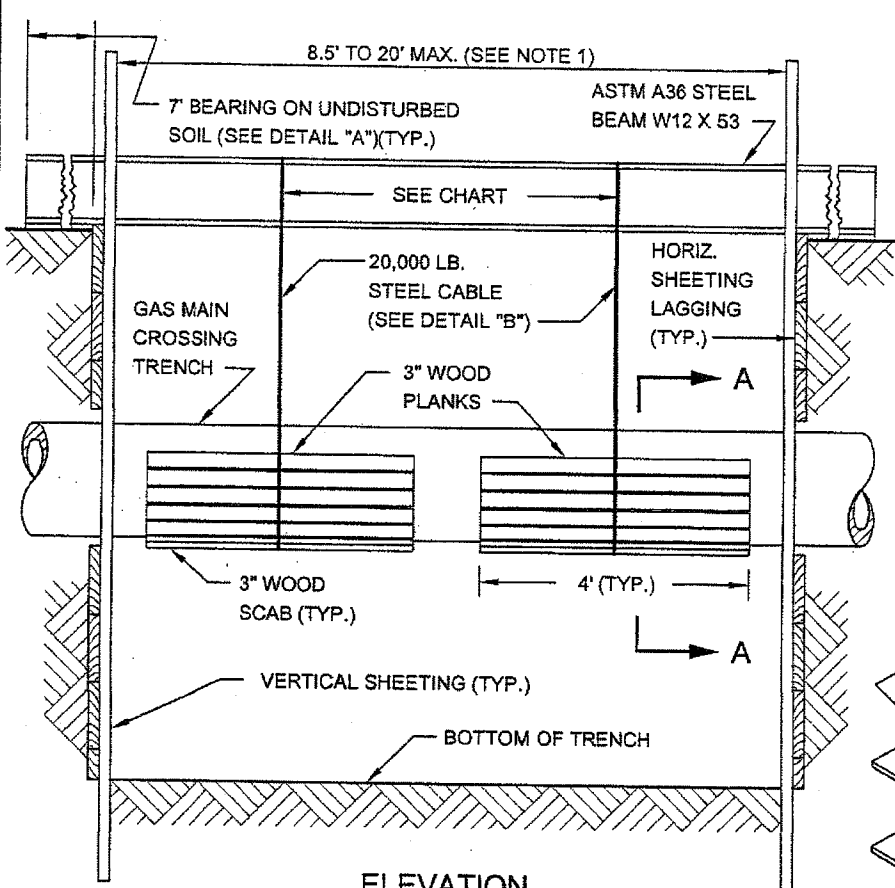


CABLE SUPPORT		TIMBER SUPPORT	
MAIN TYPE	SPACING	MAIN SIZE	TIMBER SIZE
CAST IRON	4' O.C. MAX.	UP TO 6"	6" X 6"
STEEL	10' O.C. MAX.	8" TO 10"	8" X 8"
PLASTIC	10' O.C. MAX.	12" TO 16"	10" X 10"

REVISED OCT. 2004 - L. ADRIEN
REVISED JUNE 1988 - J. WONG / W. PATALANOP / MOY

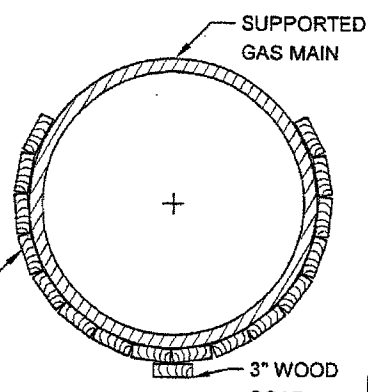
GAS COST SHARING WORK (SKETCH NO. 1A)

SUPPORT REQUIREMENTS FOR GAS MAINS OVER 16" DIAMETER UP TO AND INCLUDING 48" DIAMETER CROSSING EXCAVATION AT ANY ANGLE



ELEVATION

CABLE SUPPORT	
MAIN TYPE	SPACING
CAST IRON	4' O.C. MAX.
STEEL	10' O.C. MAX.



SECTION A-A

DETAIL "B"

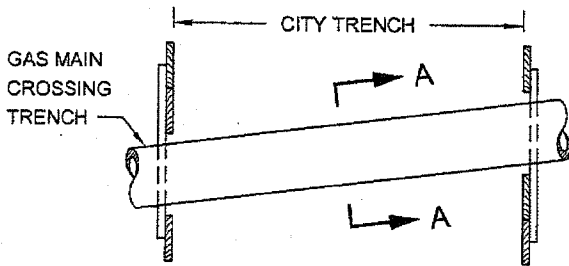
NOTES:

- (1) NO SUPPORT IS REQUIRED FOR GAS MAINS OVER 16" DIA. UP TO AND INCLUDING 48" DIA. CROSSING TRENCHES LESS THAN 8.5' WIDE.
- (2) UNDERMINE A MAXIMUM OF 8.5 L.F. OF CAST IRON GAS MAIN AT A TIME.
- (3) SET STEEL CABLE OVER 3" WOOD PROTECTIVE PLANKS AND PLACE AN ADDITIONAL 3" SCAB ON THE BOTTOM OF THE GAS MAIN.
- (4) ADJUST STEEL CABLE UNTIL DEAD WEIGHT OF THE UNDERMINED GAS MAIN HAS BEEN TAKEN UP BY THE OVERHEAD STEEL BEAM SUPPORT.
- (5) ALL SUPPORTS AND STEEL CABLES CAN BE REMOVED ONLY AFTER THE REQUIRED BACKFILL (AROUND AND BELOW GAS MAIN) HAS BEEN COMPACTED IN ACCORDANCE WITH NEW YORK CITY STANDARDS AND AT THE DIRECTIONS OF THE ENGINEER.

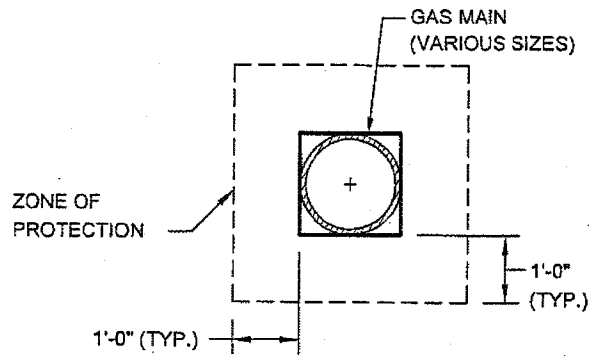
004-L ADRIEN
 REVISED 1998 - J. WONG / W. PATALANOP, MOY

GAS COST SHARING WORK (SKETCH NO. 2)

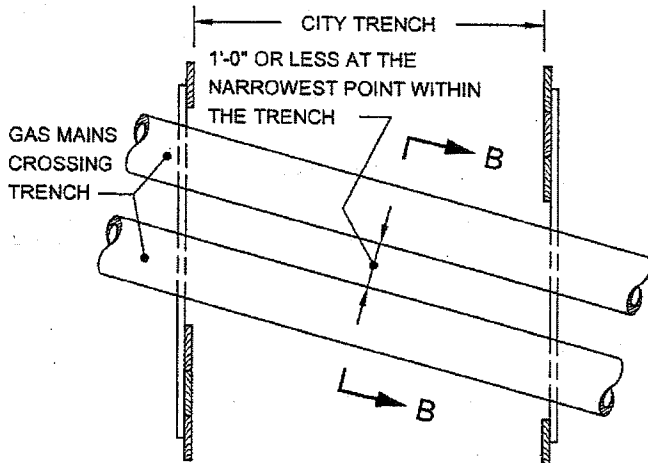
TYPICAL METHODS OF MEASUREMENT FOR GAS CROSSINGS



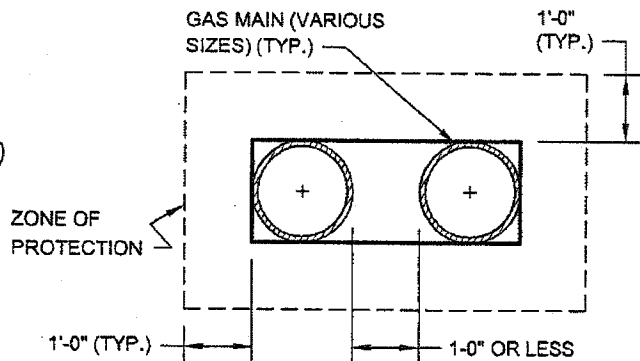
SINGLE FACILITY CROSSING



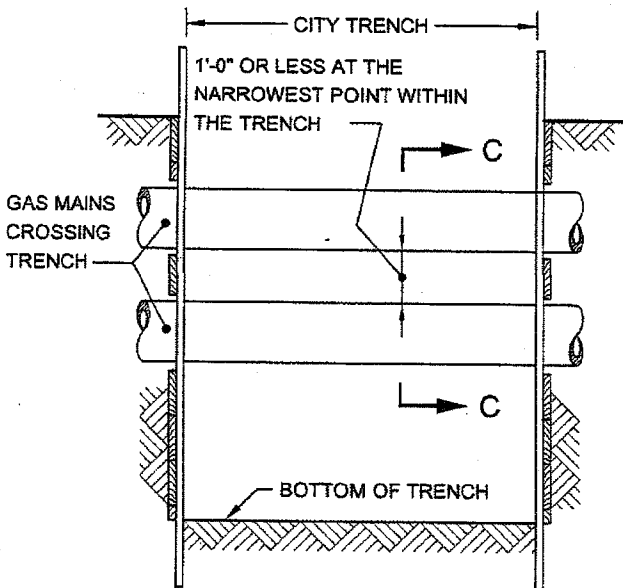
SECTION A-A



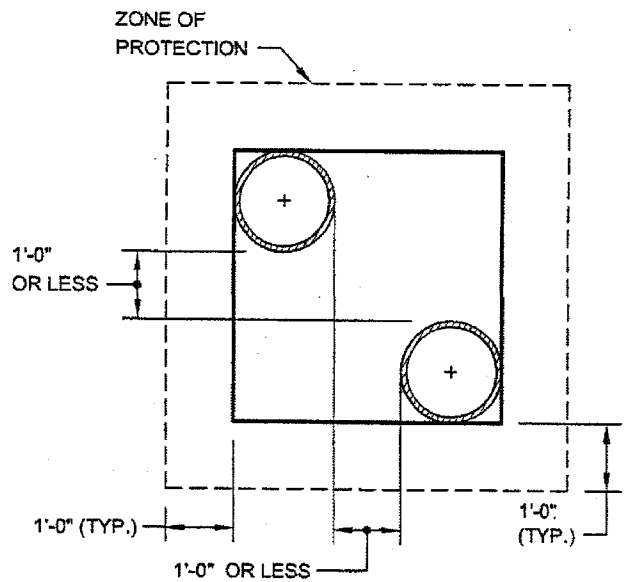
**MULTIPLE FACILITIES
(GAS MAINS AT SAME ELEVATION)**



SECTION B-B



**MULTIPLE FACILITIES
(ONE CROSSING AT DIFFERENT ELEVATIONS)**



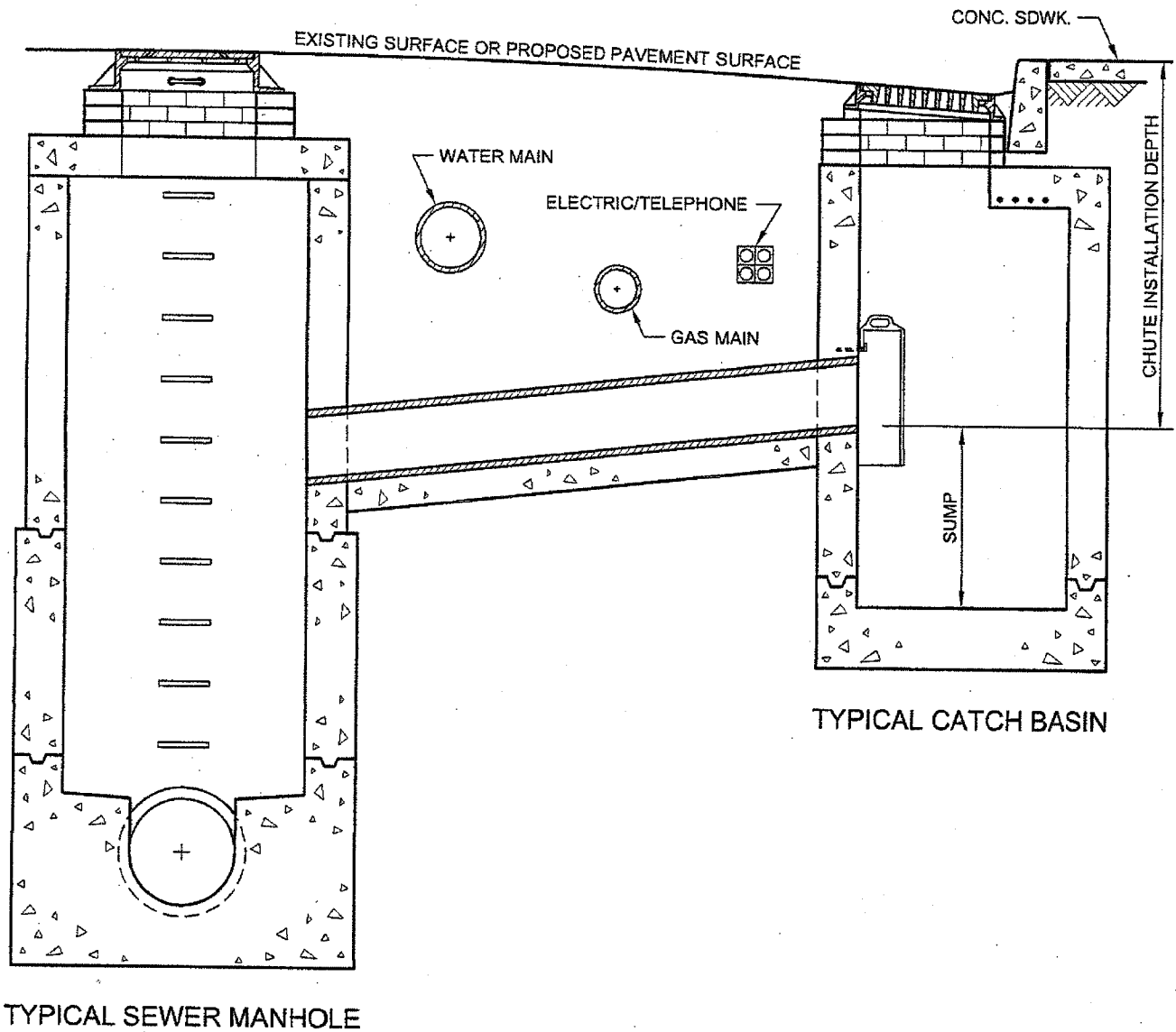
SECTION C-C

NOTE:

GAS MAINS MAY OR MAY NOT BE PARALLEL TO EACH OTHER.

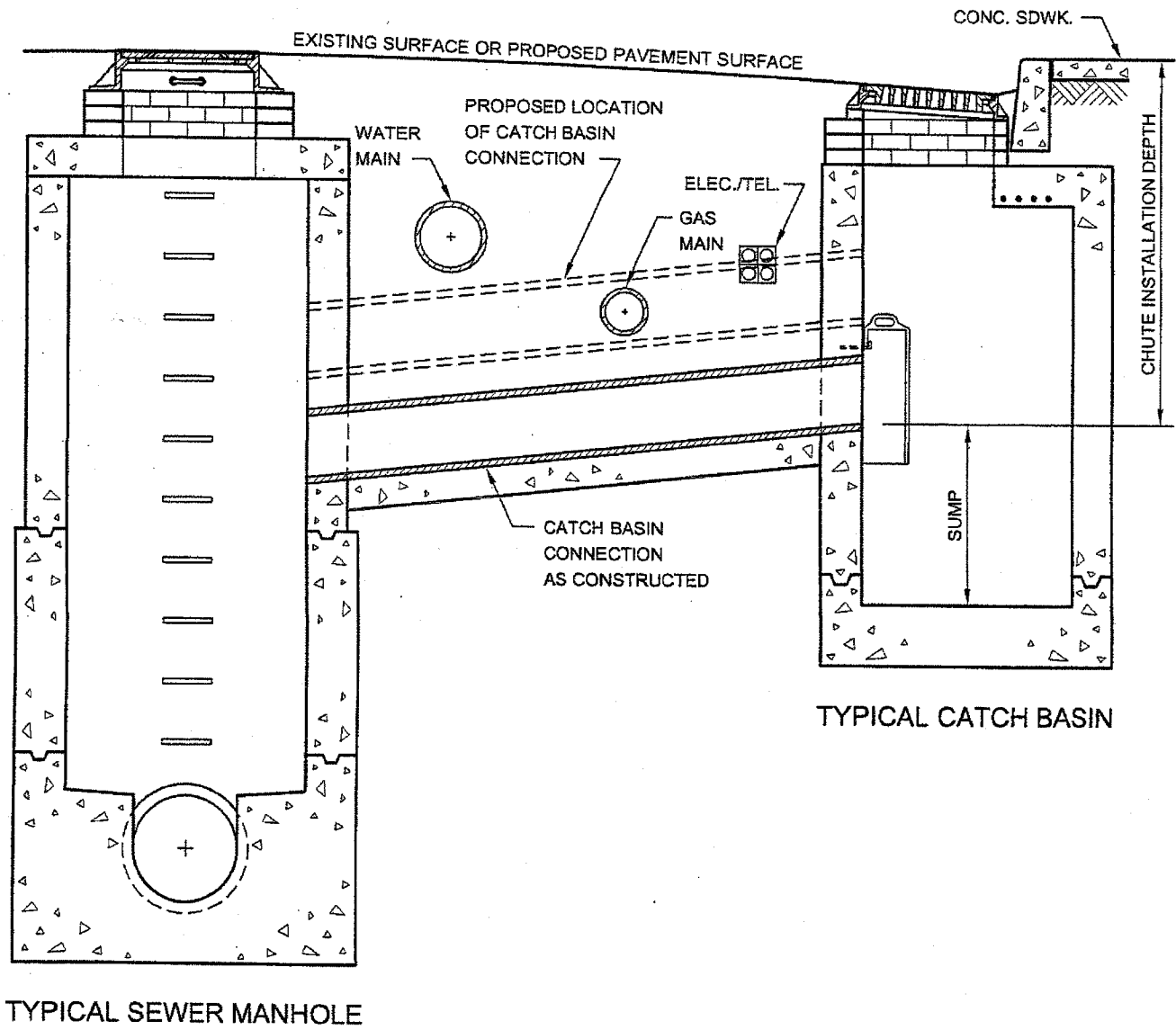
REVISED SEPT. 2004 - J. ADRIEN
REVISED SEPT. 2004 - J. WONGW. PATALANOP. MOY

GAS COST SHARING WORK (SKETCH NO. 3)
UTILITY CROSSINGS DURING CATCH BASIN CHUTE
CONNECTION PIPE INSTALLATION



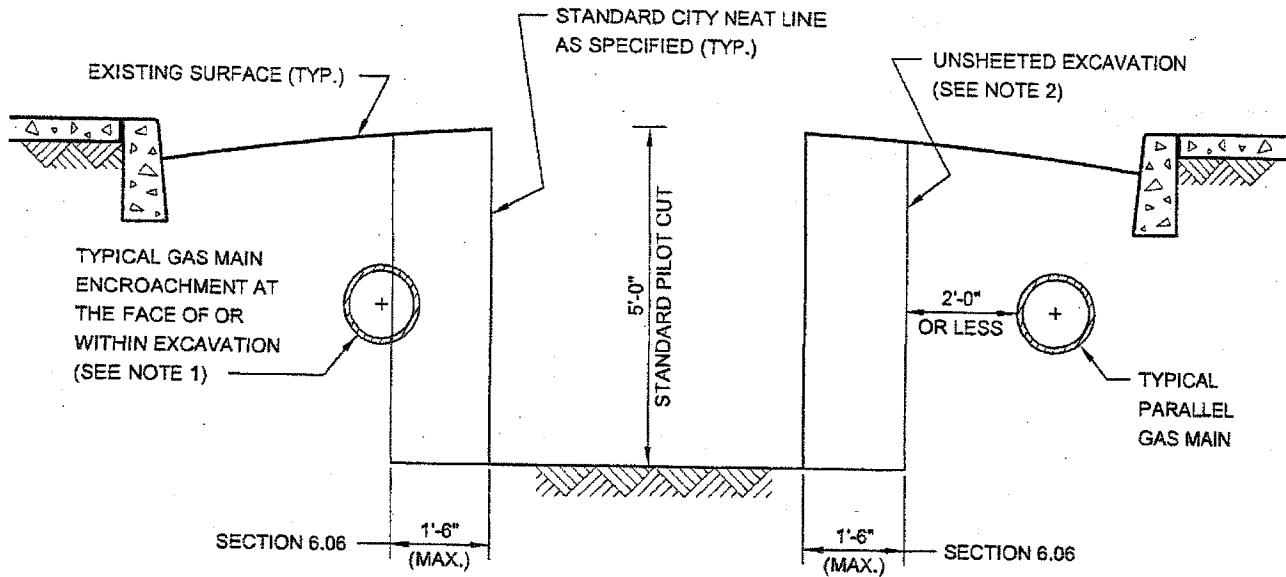
REVIS 2004-L. ADRIEN
REVISED OCT. 1988 - J. WONGAW, PATALANOP, MOY

GAS COST SHARING WORK (SKETCH NO. 4)
 UTILITY CROSSINGS DURING CATCH BASIN CHUTE
 CONNECTION PIPE INSTALLATION (EXTRA DEPTH)



REVISED OCT. 2004 - L. ADRIEN
 REVISED OCT. 1998 - J. WONG/W. PATALAN/JP. MOY

GAS COST SHARING WORK (SKETCH NO. 5)
GAS MAIN ENCROACHMENT ON AND/OR PARALLEL
TO EXCAVATION OF UNSHEETED TRENCH



NOTES:

- (1) GAS MAIN LOCATED AS SHOWN MAY HAVE TO BE REMOVED BY THE FACILITY OPERATOR PRIOR TO THE START OF CITY EXCAVATION. OTHERWISE, THE CONTRACTOR WILL BE PAID UNDER SECTION 6.06 FOR THE SAID WORK. IF GAS MAIN IS ABANDONED THEN SECTION 6.03 SHALL APPLY.
- (2) EIGHTEEN (18) INCHES FROM STANDARD NEAT LINE IS THE MAXIMUM ALLOWABLE WIDTH OF AREA THAT MAY BE DISTURBED OR EXCAVATED DURING INSTALLATION OF CERTAIN TYPES OF SHEETING SYSTEMS THAT MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS OF THE DEPARTMENT OF DESIGN AND CONSTRUCTION OF THE CITY OF NEW YORK.

**V - PRELIMINARY GAS WORK TO BE PERFORMED BY
FACILITY OPERATOR.**

APPLICABLE TO ALL GAS DRAWINGS:

- ALL RELOCATION WORK TO BE PERFORMED BY FACILITY OPERATOR.

- ALL SUPPORT AND PROTECTION WORK TO BE PERFORMED BY CITY CONTRACTOR.

- IF ADDITIONAL INFORMATION IS NEEDED REGARDING THE FACILITY OPERATOR RELOCATION WORK, THE CONTRACTOR IS ADVISED TO CONTACT THE GAS COMPANY REPRESENTATIVE:

Consolidated Edison
4 Irving place
New York, NY 11211
Mr. Mike Mobyed
212-460 4834

(NO TEXT IN THIS AREA, TURN PAGE)

Scope of Work Estimate
GAS COST SHARING SCOPE OF WORK
SUPPORT & PROTECTION
FOR CONTRACT NUMBER HWPLZ004M
CITY OF NEW YORK

The New York City Department Of Design and Construction, Division Of Infrastructure, is proposing to install sanitary sewer(s) and / or water main(s) in the locations indicated below along with all work incidental thereto.

- Item 6.01.9 Support and Protect Gas main Crossing Water Main up to 20" in Diameter (Ea.)**
- 1 in East 40th Street Between Madison Avenue and Park Avenue
3 @ the intersection of Park Avenue and East 40th Street
1 @ the intersection of Park Avenue and East 41st Street
1 in Park Avenue between East 40th Street and 41st Street
1 in East 41st Street Between Madison Avenue and Park Avenue
2 in East 42nd Street between Park Avenue & Lexington Avenue
- Item 6.01.12 Support and Protect Gas main Crossing Water Main 48" thru 54" in Diameter (Ea.)**
- 1 in Park Avenue between East 40th Street and East 41st Street
2 @ the intersection of Park Avenue & East 41st Street
- Item 6.02 Extra Excavation for the Installation of Batch Bassin Sewer Drain Pipes with Gas Interference. (Ea.)**
- 1 in 41st Street Between Madison Avenue & Park Avenue
1 in Park Avenue along East 41st Street
- Item 6.03 Removal of all Abandoned Gas Facilities. all Sizes (LF.)**
- 500 - In Various Locations As Required
- Item 6.05 Adjust Gas Hardware to grade using by resetting (Road Reconstruction) (Ea.)**
- 10 - In Various Locations, As Required
- Item 6.06 Special Care Excavation & Backfilling. (C.Y.)**
- 250 In Various Location, As Required.
- Item 6.07 Test Pits For Gas Facilities (C.Y.)**
- 100 in Various Locations, As Required
- Item 6.09 Trench Excavation and Backfill for New Gas Mains & Services. (C.Y.)**
- 450 As Indicated on Attached Contract Drawings

A3-22(a)

**VI - LISTING OF APPROXIMATE LOCATIONS OF EP-7 BID
ITEMS QUANTITIES.**

(NO TEXT IN THIS AREA, TURN PAGE)

EP-7 STD. SPECS
03/23/2009

A3-23

GAS FACILITY COST ALLOCATION AGREEMENT
PROJECT NO.

CAPITAL GAS MAIN INSTALLATION

SHEET #	LOC.	ON STREET	FROM	TO	ITEM	SIZE	TYPE	LENGTH	REIMB LENGTH	REMARKS	
1	1	E. 40	MADISON AVE.	PARK AVE.	80n	20"	STL	27' +/-	27' +/-	RET. 23 +/- 20"	CI 1916
1	1	PARK AVE.	E. 40TH	E. 39TH	80i	6"	STL	96' +/-	96' +/-	RET. 75 +/- 6"	CI 1912
1	3	PARK AVE.	E. 40TH	E. 41ST						RET. 12 +/- 6"	CI 1916
1	4	"	"	"						RET. 13 +/- 6"	CI 1912
1	4	"	"	"						RET. 4 +/- 6"	ST 1962
1	4	"	"	"						RET. 2 +/- 8"	ST 1962
1	4	"	"	"						RET. 24 +/- 8"	ST 1925
1	4	"	"	"						RET. 26 +/- 8"	ST 1925
1	4	"	"	"						RET. 149 +/- 8"	WI 1889
1	4	"	"	"						RET. 7 +/- 8"	WI 1889
1	4	"	"	"						RET. 16 +/- 8"	WI 1889
1	4	"	"	"						RET. 11 +/- 8"	ST 2007
1	4	"	"	"						RET. 68 +/- 8"	ST 2007
1	4	"	"	"						RET. 14 +/- 8"	ST 2007
1	6	E. 40TH	PARK AVE.	MADISON AVE.						RET. 8 +/- 6"	ST 1981
1	6	"	"	"						RET. 121 +/- 6"	CI 1893
1	5	PARK AVE.	E. 41ST	"	80j	8"	STL	462' +/-	462' +/-	RET. 150 +/- 4"	PE 1991
2	7	E. 42ND	PARK AVE.	LEXINGTON AVE.	82i	8"	PE	150' +/-	150' +/-		
2	7	"	"	"							

A3-23(a)

PUBLIC IMPROVEMENT ENGINEERING - QUEENS REMAINING LIFE CALCULATION (WEIGHTED) PROJECT NO.												
MAIN DESC	SIZE (IN.)	KIND	REIMB LENGTH (FT.)	INSTALL DATE	BASE LIFE 70 OR 90 YEARS	AGE TO CURRENT DATE	REMAINING LIFE		PERCENT TO TOTAL LENGTH	REMAINING LIFE % (WEIGHTED)	Current Year: 2012	
							YEARS	PERCENT			YEARS	PERCENT
1	20	CI	23	1916	90	96	0	0.00	3.16	0.00	0	0.00
2	20	CI	18	1916	90	96	0	0.00	2.47	0.00	0	0.00
3	6	CI	13	1912	90	100	0	0.00	1.78	0.00	0	0.00
4	6	ST	4	1962	70	50	20	28.57	0.55	0.16	20	0.08
5	8	ST	2	1962	70	50	20	28.57	0.27	0.08	20	0.00
6	8	ST	24	1925	70	87	0	0.00	3.29	0.00	0	0.00
7	8	ST	26	1925	70	87	0	0.00	3.57	0.00	0	0.00
8	8	WI	149	1889	90	123	0	0.00	20.44	0.00	0	0.00
9	8	WI	7	1889	90	123	0	0.00	0.96	0.00	0	0.00
10	8	WI	16	1889	90	123	0	0.00	2.19	0.00	0	0.00
11	8	ST	11	2007	70	5	65	92.86	1.51	1.40	65	8.66
12	8	ST	68	2007	70	5	65	92.86	9.33	8.66	65	14.40
13	4	PE	150	1991	70	21	49	70.00	20.58	0.00	0	0.00
14	6	ST	75	1912	70	100	0	0.00	10.29	0.00	65	1.78
15	8	ST	14	2007	70	5	65	92.86	1.92	1.78	39	0.61
16	6	ST	8	1981	70	31	39	55.71	1.10	0.61	0	0.00
17	6	CI	121	1893	90	119	0	0.00	16.60	0.00	0	0.00
TOTALS			729						100.00%	27.10%		

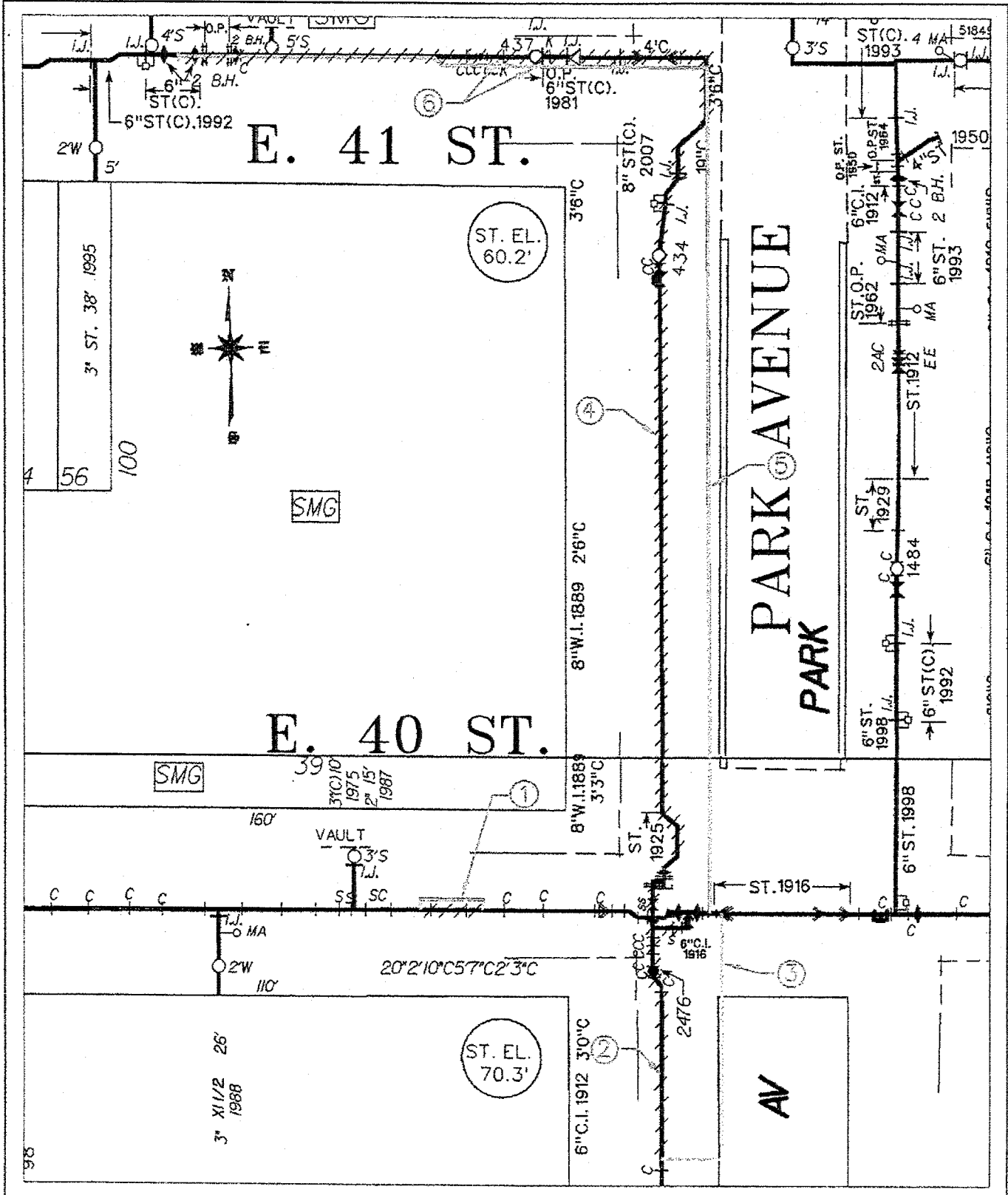
A3-23(b)

HWPLZ004M - RECONSTRUCTION OF PERSHING SQUARE WEST - BOROUGH OF MANHATTAN
 Item 6.09 - Trench Excavation / Backfill Calculation

SHEET	CAPITAL ITEMS	TRENCH DIMENSIONS				ITEM 6.09 (CY)
		L	W	D		
	INSTALL 20" LP STL MAIN East 40th Street btw. Madison Avenue and Park Avenue	27.00	3.67	4.75		17.44
	INSTALL 8" LP STL MAIN Park Avenue btw. East 40th Street and East 41st Street	292.00	2.67	4.25		122.72
	E. 41st Street btw. Park Ave. and Madison Ave.	170.00	2.67	4.25		71.45
	Int. of E. 40th Street and Park Avenue	96.00	2.50	3.50		31.11
	INSTALL 8" LP PE MAIN East 42nd Street btw. Park Avenue and Lexington Avenue	150.00	2.67	4.25		63.04

(A)	Gas trench volume	305.76
(B)	Tie in pits volume	60.55
(C)	Test Pits for gas services	1.78
	(A) + (B) + (C)	368.09
	add 20%	73.62
	Total	441.71
	say	450 CY

A3-23(c)



JUNE 2012

SCALE = 1:40

SHEET 1 OF 2



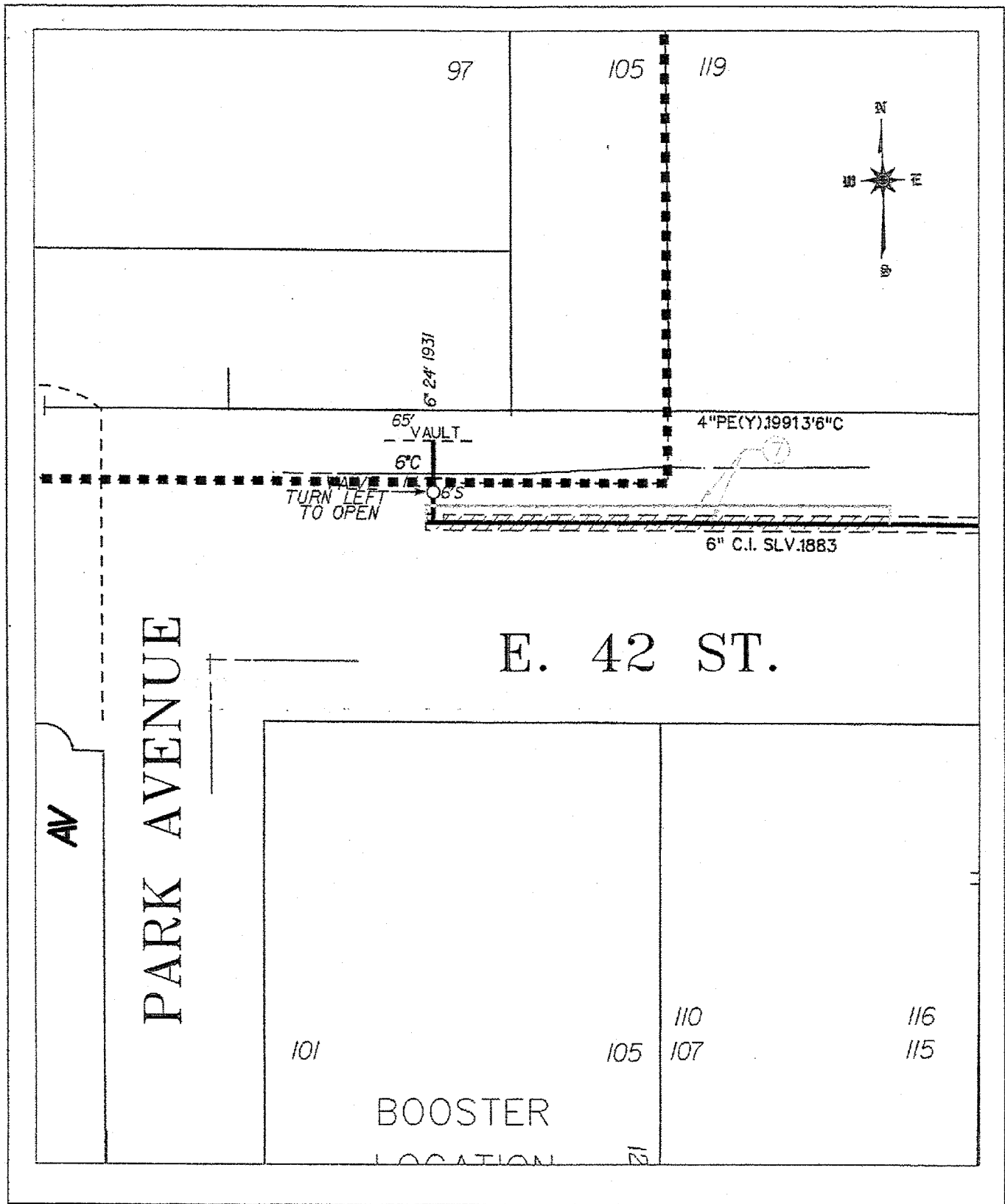
Consolidated Edison Company of New York, Inc.

CAPITAL PROJECT: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

BOROUGH OF MANHATTAN

A3-23(d)



JUNE 2012

SCALE = 1:40

SHEET 2 OF 2



Consolidated Edison Company of New York, Inc.

CAPITAL PROJECT: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

BOROUGH OF MANHATTAN

A3-23(e)

SECTION 6.09 - Trench Excavation and Backfill for New Gas Mains and Services
(To be performed by City Contractor)

1. Description:

Under this section, the contractor shall furnish all labor, materials, equipment, insurance, permits and incidentals required to break/remove roadway and sidewalk pavement, excavate, backfill and restore gas trenches. The trench to be excavated shall be determined by the size of the gas facility to be installed. The work shall be performed in accordance with applicable specifications, and/or at the direction of the Resident Engineer in consultation with the facility operator.

2. Materials:

All materials used to excavate and prepare trenches shall be supplied by the Contractor and be approved by the facility operator in consultation with the Resident Engineer. Clean sand backfill material shall be used and shall conform to Con Edison specification EO-1181-rev.5, General Specification for Backfilling of Trench and Small Openings, which is included in this contract.

3. Method of Construction:

Excavation – The Contractor shall saw cut and/or break and remove existing roadway which may include but is not limited to, asphalt, concrete and cobblestone, utilizing approved equipment that leaves a neat straight joint line along the juncture with subsequently replaced pavement. Prior to starting the trenching operation, the contractor shall excavate the appropriate gas main tie-in pits at the extremities of the gas main sections to be replaced. Test pits shall be excavated to determine exact location of all tie-in pits and at appropriate intervals along proposed trench excavation to verify lane and clearances as shown on the contract plans. The tie-in pits shall be adequately protected by the contractor using wood fencing or steel traffic plates until such time when the facility operator has completed the tie-in work. The Contractor shall be permitted to excavate utilizing a combination of machine and hand excavation, as field conditions warrant, and as directed by the facility operator. The trench shall be adjusted so as to provide for a nominal cover on the new gas facilities or as required based on field conditions, applicable specifications, or as directed by the facility operator in consultation with the Resident Engineer. The width of the trench shall be as directed by the facility operator in consultation of the Resident Engineer. The bottom of the trench shall be graded smooth with a minimum cushion of 3 inches of clean sand and in conformance with applicable specification and be compacted, to minimize initial settlement and to avoid "point" support of new gas facilities. All stones projecting into the trench bottom shall be removed, and the voids backfilled before the new gas facilities are installed. Where streets are not to final grade, the cover shall be measured from the final grade, or the existing grade, whichever provides the deeper trench. Excavation in the vicinity of utilities and other structures shall be performed using hand tools. The contractor shall properly dispose of all materials excavated away from site. Size and location of excavation shall be as directed by the facility operator in consultation with the Resident Engineer. Trenches shall be excavated to a depth and size necessary to facilitate the installation of the new gas facility and in conformance with the applicable specification. All existing facilities that are encountered during trench excavating shall be protected in a manner suitable to the facility operator in consultation with the Resident Engineer. Tight sheeting shall be used, as required, based on field conditions and/or when the depth of excavation is equal to or greater than five feet. Skeleton type sheeting will not be permitted. The sheeting required

A3-23 (f)

shall be furnished and installed in full compliance with the State of New York and Federal Safety Code requirements and in compliance with applicable specifications and/or as directed by the facility operator in consultation with the Resident Engineer. Care shall be taken that no existing gas facilities or other structures are broken or damaged. Contractor shall excavate all material encountered necessary to facilitate the installation of the new gas facilities, and as directed by the facility operator. Care should be taken to avoid damage to existing utility facilities and structures, and to pavements and their foundations, and to avoid caving or sliding banks within the excavation.

Maintenance of Trench Excavation - Excavated trenches shall be maintained free of debris and kept dry by the contractor. In order to accomplish this, contractor shall, upon completion of excavation and placement of sheeting (as required and/or if depth is equal to or greater than five feet), furnish and install adequate steel plates, as directed by the facility operator in consultation with the Resident Engineer, and posting over the excavated trenches and shall temporarily remove all equipment debris and workers, and relocate barricades in order to open the full width of street to traffic during non-working hours, as required based on DOT requirements. Con Edison forces will perform all live gas main connections, dead gas main cut-outs, and/or service work associated with disconnecting and reconnecting from old to new gas main. The Contractor shall then, at no additional cost, relocate such barricades barrels, cones and other warning devices and remove steel plates, as and when directed by the facility operator in consultation with the Resident Engineer to facilitate the installation of the new gas facilities. When work is being performed and the excavations are not covered with steel plates, the Contractor shall provide complete and safe access to the trench as may be required, and shall provide construction barricades and maintain traffic at all times as shown or as directed by the facility operator in consultation with the Resident Engineer. The contractor has the responsibility to maintain and set to grade all Con Edison hardware during backfill and pavement restoration. Upon completion of installation of the new gas facility, the trench excavation shall be backfilled by the contractor in accordance with Contract requirements and all backfill material shall conform to contract specifications for such purpose.

Pavement and Sidewalk Restoration - After backfilling is completed, the contractor shall install temporary pavement consisting of six inches (6") thick asphaltic concrete mixture in roadway areas or a two inches (2") thick asphaltic concrete mixture in sidewalk areas in order to maintain existing pedestrian and vehicular traffic. This temporary pavement shall be maintained until permanent replacement as specified in contract. Permanent pavement restoration shall be as required by the appropriate contract specifications and as directed by the Resident Engineer.

4. Method of Measurement:

The quantity to be measured for payment shall be the number of cubic yards (C.Y.) of trench actually excavated, including roadway pavement, base and/or sidewalk concrete removed within the limits of the trench as directed by the Resident Engineer in consultation with the facility operator. The volume occupied by existing pipes or other structures will be deducted from the total volume measured as shown on drawing EP-7 SECT. 6.09 GAS SPECIALTY CONTRACTOR WORK (Sheet EP7-1), or as encountered based on existing field conditions.

A3-23(g)

5. Price to Cover:

The unit price bid per cubic yard for excavation shall include the cost of all supervision, labor, material, equipment, insurance and incidentals necessary to complete excavation trenches, including backfill, compaction testing and restoration of trenches and tie-ins pits as specified or shown on the contract, plans. The bid price shall also include the cost of coordinating the sewer and water main work to be performed by the contractor with the gas installation work to be performed by others. The price shall also include, associated maintenance of traffic, and traffic plates and openings and closings of plates as may be required in order to provide access to the facility operator during the new gas facility installation, and installing, removing and maintaining tight sheeting that may be required, cut, break and remove various thickness of surface and base pavement, excavate by hand, furnish, place and compact, in compliance with DOT requirements, clean sand backfill following installation of the gas facility. Any required removing, trucking, storing, and disposing of material shall be deemed included in the unit price. The price shall also include the cost of providing temporary pavement restoration. Permanent pavement restoration shall be deemed included in this item, as required and as directed by the Resident Engineer.

A3-23 (h)



conEdison

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
4 IRVING PLACE
NEW YORK, NY 10003

DISTRIBUTION ENGINEERING
DISTRIBUTION EQUIPMENT

SPECIFICATION EO-1181
REVISION 5
OCTOBER 2008

EFFECTIVE DATE
OCTOBER 1, 2008

GENERAL SPECIFICATION FOR BACKFILLING
OF TRENCH AND SMALL OPENINGS

FILE: CONSTRUCTION STANDARDS MANUAL NO. 3, SECTION 37

TARGET AUDIENCE	REGIONAL CONSTRUCTION
NESC REFERENCE	NONE

A3-23(1)

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A3-23(j)

1.0 PURPOSE

This specification details the procedures to be followed in backfilling all Con Edison street openings for electric, gas and steam facilities.

2.0 APPLICATION

This specification applies to all Con Edison Customer Service Areas.

3.0 REFERENCE SPECIFICATION AND DEFINITIONS

- 3.1 The term "Engineer" used in this specification refers to the Distribution Equipment Engineer or his authorized representative.
- 3.2 The term Construction Representative shall mean the Construction Manager, Contract Construction Manager, or his authorized representative.
- 3.3 The terms "Type 3/8", "Type I" and "Type II" shall be as defined in EO-8085.
- 3.4 The term "small opening" shall refer to street opening which are 6' x 5' or smaller.
- 3.5 The term "suitable backfill" shall refer to in-place material excavated from the trench or opening which satisfies the following requirements:
 - 3.5.1 The excavated material shall be free of all broken asphalt pavement, broken concrete, brick, all organic material, and all debris.
 - 3.5.2 The excavated material shall be substantially sandy soil gritty and granular in texture and have a small amount of rocks compared to the total volume of soil. It shall have no rocks greater than 2 inches in size.
 - 3.5.3 The excavated material shall be substantially free of clay like or clayey soil. Clayey soil shall be determined as soil that is powder like in texture when dry and capable of being molded when wet.

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- 3.5.4 Frozen backfill material shall either be removed or broken into small particles before being compacted. Excessively wet material shall be mixed with dry material to reduce moisture content before backfilling.
- 3.5.5 Fill materials, known as "Stone Dust", or "Pond Fill", containing crystalline silica shall not be used as backfill material.
- 3.5.6 If there are any questions as to suitability of the excavated material, the Engineer shall be consulted.
- 3.6 The term "mechanical compaction" shall mean the use of equipment, either impact or plate vibratory, which is designed specifically for soil compaction. The term "hand tamping" shall mean compaction of backfill by means of a plate tamper, which will impart sufficient Force to compact the backfill material.
- 3.7 The term "wetted backfill" shall mean backfill material containing sufficient moisture so that when molded by hand it will form a firm shape. If the specimen crumbles it lacks sufficient moisture. If water is squeezed from the specimen it contains too much moisture.

4.0 REQUIREMENTS

4.1 Compaction

- 4.1.1 The term "compacted", for both "mechanical compaction" and "hand tamping", shall mean a minimum level of compaction of 95% of the maximum dry density of the backfill material used as determined by a Standard Proctor Test (ASTM D-693). In lieu of a Standard Proctor Test a "one point" test shall be done by taking a sample of the soil and compacting it using a Standard Proctor mold procedure and determining the maximum in field density that can be obtained and 95% of this value should be used as a comparison to the actual compaction achieved.
- 4.1.2 In lieu of the above, when using "suitable backfill", compaction will be considered adequate if density readings of the compacted fill equal 95% of the readings of the in-place material (i.e. density readings must be taken at the time of excavation to use as reference for compaction). For this type of "before and after" comparison, devices such as the nuclear density tester may be used.

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4.2 Density Testing

- 4.2.1 The sand-cone test, ASTM D1556- or Nuclear Density tester may be used for all in place density tests. Other methods may be used upon approval of the Engineer.
- 4.2.2 The Construction Representative or Engineer may order as many in-place density tests as he deems necessary to insure proper compaction. If an in-place density test indicates insufficient compaction, the Contractor shall re-compact the area in question until the backfill is compacted to the requirements set forth in paragraph 4.1.1. The Contractor may elect to take additional tests 5 feet on both sides of the test which failed, and average the values of the three readings. If the average value of the three tests meets the compaction requirements, the area in question will be considered sufficiently compacted and no additional compaction will be required. If the average value does not meet the compaction requirements, the Contractor will be required to pay for the two additional in-place density test and recompact the area, which has been determined to be insufficiently compacted.

4.3 Procedure For Electric Duct Backfill

- 4.3.1 The following backfill procedure shall be used for concrete duct, asbestos cement, plastic and fibre conduit.
- 4.3.2 Bedding - Where the ducts are in a rock area, a minimum 4" bed of Type 3/8" backfill shall be placed. It shall be wetted and mechanically compacted to form a firm base for the support of the ducts. Suitable backfill may be used if it is free of stones larger than 2 inches.
- 4.3.3 For concrete conduit, asbestos cement conduit, plastic and fibre conduit encased in concrete, the trench shall be filled with suitable backfill as defined in paragraph 3.5 or Type II material in 12 inch wetted lifts. Each lift shall be mechanically compacted.
- 4.3.4 For direct buried asbestos cement, plastic and fibre conduit, the trench shall be filled with Type 3/8 material to a level of 12 inches above the ducts. It shall be compacted by hand in a no more than
- 4.3.5 12 inch wetted lifts. The remaining trench shall be backfilled with suitable backfill or Type II material in 12 inch wetted lifts mechanically compacted.

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4.4 Procedure For 138kv Cable Pipe Installation

4.4.1 All installation of 133KV and 345KV cable pipe type feeders shall comply with the requirements set forth in EO-1104 and EO-1171 respectively.

4.4.2 The requirement for the use of excavated material as "suitable backfill" shall follow the requirements of paragraph 3.5.

4.5 Procedure For Backfilling Gas Trenches & Small Openings

4.5.1 Coated Steel & Plastic Gas Pipe Trenches

- a. A smooth surface shall be excavated in the bottom of the trench and the pipes laid to grade. Where the trench is in a rock area, a minimum of 4 inches of Type 3/8 material shall be placed, wetted and mechanically compacted to form a firm base for the gas pipes.
- b. The trench shall be backfilled with Type 3/8 material to a height of 12 inches above the pipe in a maximum of 12 inch wetted lifts which shall be hand compacted.
- c. The remaining trench shall be backfilled with Type 3/8, Type I, Type II or suitable existing backfill in a maximum of 12 inch wetted lifts, which shall be mechanically compacted.
- d. The density of the compacted backfill shall be tested and accepted or rejected in accordance with paragraph 4.2.2.

4.5.2 Cast Iron, Plastic & Steel Gas Pipe In Small Openings

- a. Backfill material shall be Type 3/8, or suitable existing backfill, which has been segregated to remove all rocks, which may damage the pipe coating.
- b. Openings shall be backfilled to a height of 12 inches above the pipe in a maximum of 12 inch wetted lifts, which shall be hand, compacted. The remainder of the openings shall be backfilled in 12 inch wetted lifts with Type I or Type II or "suitable backfilled" as per paragraph 7 which shall be mechanically compacted.

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- c. The density of the compacted backfill shall be tested and accepted or rejected in accordance with paragraph 4.2.2.

4.6 Backfilling Concrete Coated & Steel Jacketed Steam Main Trenches

- 4.6.1 Bedding - A smooth surface shall be established in the bottom of the trench and the pipes leveled and laid on a firm base. Where the trench is in a rock area, a minimum of 4 inches of Type I material shall be placed, wetted and mechanically compacted to form a firm base.
- 4.6.2 The trench shall be backfilled with Type I, or Type II or suitable backfill material in 12 inch wetted lifts, which shall be mechanically compacted.
- 4.6.3 The backfill shall be tested and accepted or rejected in accordance with paragraph 4.2.2.

5.0 PRECAUTIONS

If a work site is found to contain existing fill material that contains or comprised of "Stone Dust" or "pond Fill", the contractor shall cover the material with a 3" layer of sand. If this material is found to be stockpile at a work site, it shall be covered with a tarpaulin or removed from the work site.

Edward A. Bertolini (Signature on File)
 Joseph Somma
 Department Manager
 Distribution Substation and Equipment
 Distribution Engineering Department

Jay Sun

<u>REVISION No. 5</u>	<u>FILE:</u>
Updated Format	Construction Standards Manual 3 Section 237 - Subway

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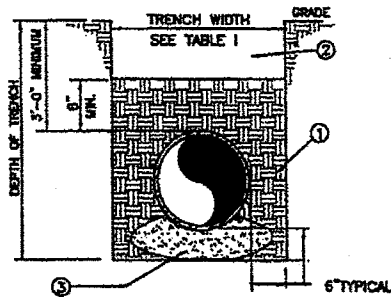
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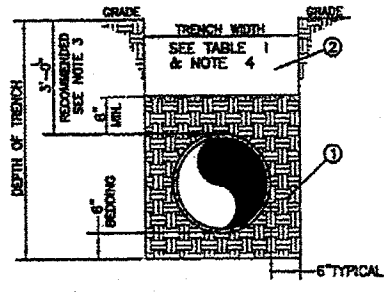
REVISIONS

R. RORRAN	7/21/98	0	
M. BALDWIN	2/02/06	1	REVISED TRENCH WIDTH FOR 4" THRU 12" MAINS IN TABLE 1 REMOVED REQUIREMENT FOR SANDBAGS FOR STEEL DISTRIBUTION MAIN
M. BALDWIN	4/04/06	2	ADDED REQUIREMENTS OF SAND BAGS FOR STEEL DISTRIBUTION MAIN
RAL	4/4/06		
M. BALDWIN	3/12/06	3	INCREASED TRENCH WIDTH OF 18" AND GREATER SEE MAINS IN TABLE 1
P.L.S.	1/28/06		

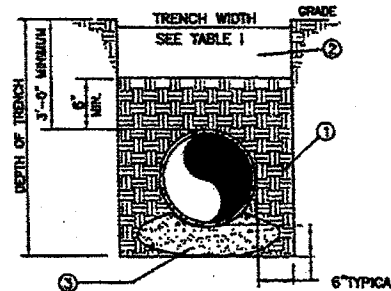


SANDBAG CLASS & STOCK # 000-0075

STEEL MAIN (DISTRIBUTION)



PLASTIC MAIN (DISTRIBUTION)



SANDBAG CLASS & STOCK # 000-0075

STEEL MAIN (TRANSMISSION)

BILL OF MATERIAL		
ITEM NO.	DESCRIPTION	SPEC. OR DWG. NO.
1	3/8" SAND/CLEAN FILL/ RECYCLED BACKFILL	EO-8085
2	SUITABLE BACKFILL	EO-1181
3	SANDBAG	ASTM C-33

TABLE 1		
SIZE OF MAINS	TRENCH WIDTH	DEPTH OF TRENCH
1/4"	1'-4"	3'-8"
1/2"	1'-4"	3'-8"
3/4"	1'-4"	3'-8"
1"	1'-4"	3'-10"
1 1/2"	1'-4"	3'-11"
2"	1'-8"	4'-1"
3"	1'-8"	4'-1"
4"	1'-8"	4'-3"
6"	1'-10"	4'-3"
8"	2'-0"	4'-6"
10"	2'-0"	4'-6"
12"	2'-0"	4'-6"
16"	2'-6"	4'-10"
20"	3'-0"	4'-10"
24"	3'-0"	4'-10"
30"	3'-6"	5'-0"
36"	3'-6"	5'-0"

GENERAL NOTES:

- VARIATIONS IN COVER MAY BE REQUIRED BECAUSE OF SUBSURFACE CONDITIONS INCLUDING DEPTH OF EXISTING FACILITIES. WHEN COVER IS LESS THAN 2'-0" FOR DISTRIBUTION MAINS OR LESS THAN 3'-0" FOR TRANSMISSION MAINS, THE PIPE SHALL BE PROTECTED AS PER DWG. EO-6799-C.
- WHEN SHEETING IS USED, THE "TRENCH WIDTH" DIMENSION SHALL BE MEASURED FROM THE INSIDE OF THE SHEETING.
- DISTRIBUTION MAINS SHOULD BE INSTALLED WITH 3'-0" OF COVER SO AS TO ALLOW THE COVER ON THE SERVICE PIPING TO BE A MINIMUM OF 2'-0".
- WHEN INSTALLING COILED PLASTIC PIPE, THE TRENCH WIDTH CAN BE LESS THAN SHOWN.
- INSTALL A SANDBAG AT 10' INTERVALS.

REFERENCE DWGS. & SPECS:

GAS MAINS INSTALLATION	G-8005
SHEETING	EO-16954-B
	EO-16985-B
PROTECTIVE COVER	EO-6799-C
BACKFILLING	EO-1181
	EO-8085

THIS DWG. SUPERSEDES ----- EO-7822

EFFECTIVE DATE 8/21/98

TRENCH EXCAVATION FOR GAS MAINS UP TO 350 PSIG

CONSOLIDATED EDISON COMPANY OF N.Y., INC.
GAS OPERATIONS DEPT.

DATE 7/21/98
LAST REV. 3/12/98

DWG. NO. **309495** REV. 3

GAS OPERATIONS
CONSTRUCTION STDS.
VOLUME 2
SECTION 5

END OF ADDENDUM No. 3
This Addendum Consists of Forty Six (46) Pages

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

**Together With All Work Incidental Thereto
BOROUGH OF MANHATTAN**

ADDENDUM NO. 4

DATED: March 13, 2013

**Specifications For
Abatement Of Coal Tar Wrap Asbestos Containing Materials
ASSOCIATED WITH WATER MAIN REPLACEMENTS
IN PARK AVENUE SOUTH
BOROUGH OF MANHATTAN**



**NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION**

Prepared By:

**Bureau of Environmental and Geotechnical Services
30-30 Thomson Avenue, 5th Floor
Long Island City, New York 11101**

Revision #: 00 or Final Submission
Date: 10/16/2009

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and hereby made part of said Contract Documents to the same extent as if it was originally included herein.

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SECTION 67.11
INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON
EXISTING STEEL PIPE WATER MAIN TO BE REMOVED

67.11.1 GENERAL**67.11.1.1 DESCRIPTION**

- (A) The contract documents are as defined in the "Standard Construction Contract". The General Conditions shall apply to all work of this section.
- (B) Work specified herein shall be the removal and disposal of water main pipe of the specified diameter covered with Coal Tar Wrap Asbestos-Containing Materials (ACM) and asbestos-contaminated materials from designated areas of the water main replacement on this project.
- (C) The phasing and scheduling of work for this project shall be coordinated with and approved by the Engineer. The Engineer will make the final determination on all issues under this contract covered by this specification in coordination with NYC Department of Design and Construction's Bureau of Environmental and Geotechnical Services (BEGS).

67.11.1.2 SCOPE OF WORK

- (A) The Contractor is to provide all labor, materials, equipment, services, testing, appurtenances, permits and agreements necessary to perform the work required for the abatement of ACM and removal of pipe covered with asbestos-containing Coal Tar Wrap as required by these contract documents. All work shall be performed in accordance with this specification, EPA regulations, OSHA regulations, New York City Local Law 70, Title 15, Chapter 1 RCNY, New York State Industrial Code 56, NIOSH recommendations, and any other applicable federal, state or local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions are applicable.
- (B) The intent of this section is to ensure that the Contractor is responsible for the following:
 - (1) Abatement of all ACM.
 - (2) Cleaning and decontamination of the entire affected area.
 - (3) Removal of various sections of pipe in varying lengths, as necessary, that may be required to access ACM in each excavated area. The Contractor shall dispose of all debris associated with such removal activities as ACM waste.
 - (4) Removal and disposal of all ACM found within these areas such as soil within excavated area, section of pipes, and coal tar wrap, etc.
 - (5) Provide all scaffolding, platform installation, equipment, tools, transportation and any other equipment required and/or necessary to complete all work described in the contract documents.
 - (6) The Contractor shall be responsible for and shall include in the Contractor's bid any and all fees or changes imposed by Local, State or Federal Law, Rule or Regulation applicable to the work specified herein, including fees or charges which may be imposed subsequent to the date of the Bid Opening.
- (C) The Contractor shall perform the following work as described below and indicated on the drawings. The drawings are only a diagrammatic representation of the work areas and do not constitute the actual quantities of material and or size of the pipe. Contractor is responsible for the confirmation of the actual total quantities of the work to be performed prior to bidding.

WORK AREA EXCAVATION:

- Remove and dispose of asbestos-containing coal tar pipe wrap within work area. Asbestos-containing coal tar wrap shall be removed utilizing the approved NYCDEP procedure outlined below. Variance for utilizing this procedure within the work area shall be applied for by the Contractor and approved by the New York City Department of Environmental Protection (NYCDEP) prior to the start of abatement activities. In areas where coal tar wrap and pipe with coating of same are to be removed, the Contractor shall be responsible to remove all coal tar wrap material within the soil below the area where the pipe has to be removed. Repeating this procedure at several locations will not be cause for additional compensation to the Contractor. All piping and associated materials as well as impacted soil shall be disposed of as contaminated waste.
- (D) The Contractor's attention is directed to the fact that patents cover certain methods of asbestos abatement indicated in the specifications. To date, patents have been issued with regard to negative pressure enclosures or negative or reduced pressure and glove-bag.
- (E) The Contractor shall be solely responsible for and shall hold the City of New York Department of Design and Construction and the City harmless from any and all damages, losses and expenses resulting from any infringement by Contractor of any patent including, but not limited to, the patents described above, used by Contractor during performance of this agreement.
- (F) Prior to starting, the Contractor must notify the Commissioner of the City of New York Department of Design and Construction if the Contractor anticipates any difficulty in performing the work as directed and required by these specifications. The Contractor shall be required to attend an on-site job meeting with the Engineer prior to start of work to examine conditions of the site for removal and plan the sequence for removal operations.
- (G) The Contractor is responsible for amending the Asbestos Inspection Report (ACP-7) and resubmitting it to the NYCDEP Asbestos Control Program prior to abatement work as per Title 15, Chapter 1 of RCNY for any changes in quantities and/or starting date.
- (H) If more than one (1) year has elapsed since the original ACP-7 was submitted to the Department of Environmental Protection, the Contractor is responsible for preparing and submitting a new ACP-7 to the Department of Environmental Protection as well as providing all other notifications to various regulatory agencies as required.
- (I) In addition, the Contractor is also responsible for preparing, amending and submitting any Asbestos Variance Applications (ACP-9) that may be required for the completion of the contract or incidental work.
- (J) The Contractor is also responsible for preparing and submitting all filings, notifications, etc. required by all City, State and Federal regulatory agencies having jurisdiction.
- (K) For coordination with other contractors, see the General Conditions governing all contracts.
- (L) Related Asbestos Removal Work Under Other Contracts:
- (1) Each contractor shall be responsible for the removal of incidental asbestos not identified in this section and found prior to or during the work.
 - (2) Incidental asbestos is defined as ACM that is discovered during the course of their work that must be abated to enable contractors to perform the work of their contract.
- (M) Work Hours:

- (1) The Contractor shall establish the Contractor's work schedule in a way that avoids interference or conflict with the normal activities of the area. Work in the evenings shall be done at no additional cost to the City.
- (2) All work shall be done during regular working hours unless the Contractor requests authorization to work in other than regular working hours and such authorization is granted by the Commissioner. (Regular working hours are those during which any given facility in which work is to be done is customarily open and functioning). If such work schedule is authorized by the Commissioner the work shall be done at no additional cost to the City.
- (3) The order of phases and start dates associated with each will be determined by the Engineer.
- (4) Waste transfer must be approved by the Engineer.

(N) Stages Of Asbestos Removal Work:

The Abatement Contractor or Subcontractor will be required to perform the work and it is the intent of this specification to remove all asbestos-containing and asbestos contaminated materials from the work area. The Contractor is responsible for verifying all quantities of materials listed here and bid accordingly.

- (O) Certain equipment in the work area may need to remain operational during removal. Therefore, the removal of ACM from this equipment shall be performed as the last removal activities within the work area. The Contractor shall coordinate the scheduling for the removal of ACM on functioning equipment with the Engineer.

67.11.1.3 SPECIAL EXPERIENCE REQUIREMENTS FOR ASBESTOS ABATEMENT

- (A) General: The special experience requirements set forth in Paragraph (B) below apply to the contractor who will be performing the Asbestos Abatement work under this contract. 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 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.

- (1) Evaluation: Compliance with the special experience requirements for Asbestos Abatement must be submitted for evaluation a minimum of thirty (30) days prior to commencement of that phase of work which may require removal coal tar wrap asbestos-containing materials. The Contractor is advised that the Contractor will not be permitted to commence excavation work at the site for that phase of construction which may require possible removal of coal tar wrap asbestos-containing materials, should the Contractor's Asbestos Abatement contractor fail to comply with the special experience requirements. Compliance with the experience requirements set forth herein will be determined solely by the City.

- (2) Compliance By The Asbestos Abatement Contractor As An Entity: Compliance with the special experience requirements must be demonstrated by the Asbestos Abatement contractor. The Asbestos Abatement contractor itself must have been in existence as the same entity for the three (3) year period prior to the bid opening. During such period, the bidding entity itself must have achieved compliance with the special experience requirements. The Asbestos Abatement contractor entity may not use or rely on the experience or credentials of any other entity regardless of any relationship such other entity may have to the Asbestos Abatement contractor.

- (B) Requirements: The Asbestos Abatement contractor must demonstrate compliance with the special experience requirements set forth in subparagraphs (1) through (5) below. The Asbestos Abatement contractor must submit documentation demonstrating compliance with all listed requirements. Such documentation shall include without limitation, all required licenses, certificates, and documentation.

- (1) The Asbestos Abatement contractor must, whether an individual, corporation, partnership, joint venture or other legal entity, demonstrate for the three (3) year period prior to the bid opening, that it has been licensed by the New York State Department of Labor, as an "Asbestos Contractor".
 - (2) The Asbestos Abatement contractor must, for the three (3) year period prior to the bid opening, have been in the business of providing asbestos abatement services as a routine part of its daily operations.
 - (3) The Asbestos Abatement contractor proposing to do asbestos abatement work must be thoroughly experienced in such work and must provide evidence of having successfully performed and completed in a timely fashion at least five (5) asbestos abatement projects of similar size and complexity. The aggregate cost of these projects must be at least \$1,000,000 in each of the three (3) years.
 - (4) For each project submitted to meet the experience requirements set forth above, the Asbestos Abatement contractor must submit the following information for the project: name and location of the project; name title and telephone number of the owner or the owner's representative who is familiar with the Asbestos Abatement contractor's work; brief description of the work completed as a prime or sub-contractor; amount of contract or subcontract; and, the date of completion.
 - (5) The Asbestos Abatement contractor must demonstrate that it has the financial resources, supervisory personnel and equipment necessary to carry out the work and to comply with the required performance schedule, taking into consideration other business commitments. The Asbestos Abatement contractor must submit such documentation as may be required by the Department of Design and Construction to demonstrate that it has the requisite capacity to perform the required services of this contract.
- (C) Throughout the specifications, reference is made to codes and standards which establish qualities and types of workmanship and materials, methods for testing and reporting on the pertinent characteristics thereof to provide materials or workmanship that meet or exceed the specifically named codes or standards where required by these specifications.
- (D) Site Investigation: The Contractor shall inspect all the specifications and related drawings, and will investigate and confirm the site conditions affecting the work, including, but not limited to:
- (1) Physical considerations and conditions of both the material and structure. These considerations include any obstacles or obstructions encountered in accessing or removing the material.
 - (2) Handling, storage, transportation and disposal of the material.
 - (3) Availability of qualified and skilled labor.
 - (4) Availability of utilities.
 - (5) Exact quantities of all materials to be disturbed and/or removed.

67.11.1.4 WORK BY OTHERS

The City reserves the right during the term of this contract to have work performed on asbestos abatement projects by other contractors as the situation warrants.

67.11.1.5 DEFINITIONS

- (A) General Explanation: Certain terms used in this specification are defined below. Definitions and explanations of this specification are not necessarily complete or exclusive, but are general for the work to the extent they are not stated more explicitly in another element of the contract documents.

(B) Definitions In General Use:

- (1) Approve: Where used in conjunction with Engineer's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be held to limitations of Engineer's responsibilities and duties as specified in contract documents. In no case will "approval" by Engineer be interpreted as a release of Contractor from responsibilities to fulfill requirements of contract documents.
- (2) Directed, Requested, Etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by Engineer," "requested by Engineer," and similar phrases. However, no such implied meaning will be interpreted to extend Engineer's responsibility into Contractor's responsibility for construction supervision.
- (3) Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
- (4) Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.
- (5) Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.
- (6) Installer: The term "installer" is defined as the entity (person or firm) engaged by Contractor, or its subcontractor or sub-subcontractor for performance of a particular unit of work at project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (installers) be expert in operations they are engaged to perform.
- (7) Provide: Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
- (8) Testing Laboratory: The term "Testing Laboratory" is defined as an entity engaged by the City to perform specific inspections or tests of the work, either at project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.

(C) Definitions Relative To Asbestos Abatement:

- (1) Abatement: Procedures physically taken to control fiber release from ACM. This includes removal, encapsulation, enclosure, and repair.
- (2) Aggressive Sampling: Method of sampling in which the individual collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.
- (3) AIHA: American Industrial Hygiene Association.
- (4) Airlock: System for permitting entrance and exit while restricting air movement between a contaminated area and an uncontaminated area. It consists of two (2) curtained doorways separated by a distance of at least three (3) feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.

- (5) Air Sampling: Process of measuring the fiber content of a known volume of air collected during a specific period. The procedure utilized for asbestos follows the NIOSH Standard Analytical Method 7400, or the provisional transmission electron microscopy methods developed by the US EPA which is utilized for lower detection levels and specific fiber identification.
- (6) Amended Water: Water to which a surfactant has been added.
- (7) ANSI: American National Standards Institute.
- (8) Area Air Sampling: Any form of air sampling or monitoring where the sampling device is placed at some stationary location.
- (9) Asbestos: Any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.
- (10) Asbestos-Containing Material (ACM): Asbestos or any material containing more than one percent (1%) asbestos.
- (11) Asbestos-Containing Waste Material: ACM or asbestos-contaminated objects requiring disposal.
- (12) Asbestos Handler: Individual who disturbs, removes, repairs, or encloses friable asbestos material. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.
- (13) Asbestos Handler Supervisor: Individual who supervises the handlers during an asbestos project and ensures that proper asbestos abatement procedures as well as individual safety procedures are being adhered to. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.
- (14) Asbestos Handling Certificate: Certificate(s) issued to individuals who have met the criteria established by NYCDEP and/or NYSDOL.
- (15) Asbestos Inspection Report: A report on the condition of a building or structure in relation to the presence and condition of asbestos therein.
- (16) Asbestos Investigator: An individual certified by NYCDEP as having successfully demonstrated the ability to identify the presence of and evaluate the condition of asbestos in a building or structure.
- (17) Asbestos Project: Any form of work performed in connection with the alteration, innovation, modification, or demolition of a building or structure which will disturb (e.g. remove, enclose, encapsulate) more than three (3) linear feet or more than three (3) square feet of friable ACM.
- (18) ASTM: The American Society for Testing and Materials International.
- (19) Authorized Visitor: Authorized visitor shall mean the Commissioner and the Commissioner's representative, and any representative of a regulatory or other agency having jurisdiction over the project.
- (20) Certified Industrial Hygienist (CIH): Individual with a minimum of five (5) years experience as an industrial hygienist and who has successfully completed both levels of the examination administered by the American Board of Industrial Hygiene and who is currently certified by that board.
- (21) Certified Safety Professional (CSP): Individual having a bachelor's degree from an accredited college or university and a minimum of four (4) years experience as a safety professional and

who has successfully completed both levels of the examination administered by the Board of Certified Safety Professionals and who is currently certified by that board.

- (22)City: Shall mean the City of New York.
- (23)Clean Room: An uncontaminated area or room that is part of worker decontamination enclosure system with provisions for storage of workers' street clothes and protective equipment.
- (24)Clearance Air Monitoring: Employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers and shall be performed as the final abatement activity.
- (25)Commissioner: Shall mean the head of the Agency that has entered into this contract or a duly authorized representative.
- (26)Competent Person: Shall mean the designated person as defined in OSHA 29CFR 1926.1101.
- (27)Curtained Doorway: Device that consists of at least three (3) overlapping sheets of polyethylene over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and left side. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.
- (28)Decontamination Enclosure System: Series of connected rooms, separated from the work area and from each other by air locks, for the decontamination of workers, materials, waste containers, and equipment.
- (29)Encapsulant (Sealant) or Encapsulating Agent: Liquid material which can be applied to ACM and which temporarily controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). This may also be used to seal surfaces from which ACM has been removed.
- (30)Encapsulation: Coating or spraying of ACM with a sealant.
- (31)Enclosure: Construction of airtight walls and/or ceilings between ACM and the facility environment, or around surfaces coated with ACM, or any other appropriate procedure as determined by the NYCDEP which prevents the release of asbestos fibers.
- (32)ELAP: Environmental Laboratory Approval Program administered by the New York State Department of Health.
- (33)EPA or USEPA: United States Environmental Protection Agency.
- (34)Equipment Room: Contaminated area or room that is part of the worker decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.
- (35)Fixed Object: Utility or associated piping within the work area that cannot be removed from the work area.
- (36)Friable Asbestos Material: Asbestos or any ACM that can be crumbled, pulverized, or reduced to powder when dry, by hand or other mechanical pressure.
- (37)Glove-Bag Technique: Method for removing friable ACM from heating, ventilation, and air conditioning (HVAC) ducts, short piping runs, valves, joints, elbows, and other nonplanar surfaces in a noncontained work area. The glove-bag assembly is a manufactured device consisting of a glove-bag (constructed of at least 6-mil transparent polyethylene), two inward-projecting long sleeve gloves, one inward-projecting water wand sleeve, an internal tool pouch, and an attached,

labeled receptacle for asbestos waste. The glove-bag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all asbestos fibers released during the removal process.

- (38)HEPA-Filter: High efficiency particulate air filter capable of trapping and retaining 99.97-percent of particles (asbestos fibers) greater than 0.3-micrometers mass median aerodynamic equivalent diameter.
- (39)Holding Area: Chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area.
- (40)Homogeneous Work Area: Portion of the work area that contains one type of ACM and/or where one type of abatement is used.
- (41)Industrial Hygiene: Science and art devoted to the recognition, evaluation, and control of those environmental factors or stresses, arising in or from the work place, which may cause sickness, impaired health and well being, or significant discomfort and inefficiency among worker or among the citizens of the community.
- (42)Industrial Hygienist: Individual having a college or university degree or degrees in Engineering, Chemistry, Physics or Medicine, or related Biological Sciences who, by virtue of special studies and training, has acquired competence in industrial hygiene. Such special studies and training must have been sufficient in all of the above cognate sciences to provide the abilities:
 - (a) To recognize the environmental factors and to understand their effect on people and their well being; and,
 - (b) To evaluate, on the basis of experience and with the aid of quantitative measurement techniques, the magnitude of these stresses in terms of ability to impair people's health and well being; and,
 - (c) To prescribe methods to eliminate, control, or reduce such stresses when necessary to alleviate their efforts.
- (43)Large Asbestos Project: Asbestos project involving the disturbances (e.g. removal, enclosure, encapsulation) of 260-linear feet or more of friable ACM or 160-square feet or more of friable ACM.
- (44)Major Violation: Any action, on the job performance or lack of performance that may place any individual at risk other than the worker who commits the violation. A major violation is equivalent to two (2) violation points.
- (45)Minor Asbestos Project: Project involving the disturbance (e.g. removal, enclosure, encapsulation, repair) of more than three (3) linear feet, but not more than twenty-five (25) linear feet of friable ACM or more than three (3) square feet, but not more than ten (10) square feet of friable ACM.
- (46)Minor Violation: Any action, on the job performance or lack of performance that may place the worker at risk. A minor violation is equivalent to one (1) violation point.
- (47)Movable Object: Any equipment or utility in the work area that can be removed from the work area.
- (48)Negative Air Pressure Equipment: Portable local exhaust system equipped with HEPA filtration. The system shall be capable of creating a negative pressure differential between the outside and inside of the work area.
- (49)NESHAPS: National Emission Standards for Hazardous Air Pollutants.

- (50)NIOSH: National Institute for Occupational Safety and Health.
- (51)NYCDEP: New York City Department of Environmental Protection.
- (52)NYSOL: New York State Department of Labor.
- (53)Occupied Area: Area of the work site where abatement is not taking place and where personnel or occupants normally function or where workers are not required to use personal protective equipment.
- (54)OSHA: Occupational Safety and Health Administration.
- (55)Person: Individual, partnership, company, corporation, association, firm, organization, governmental agency, administration, or the NYCDEP, or any other group of individuals, or any officer or employee thereof.
- (56)Personal Air Monitoring: Method used to determine employees' exposure to airborne fibers. The sample is collected outside the respirator in the worker's breathing zone.
- (57)Personal Protective Equipment (PPE): Appropriate protective clothing, gloves, eye protection, footwear, and head gear.
- (58)Physician: Person licensed or otherwise authorized under Article 131 Section 65.22 of the New York State Education Law.
- (59)Plasticize: Cover floors and walls with polyethylene sheeting as herein specified or by using spray plastics as acceptable to the NYCDEP.
- (60)Professional Engineer (PE): Individual having, at a minimum, a Bachelor's Degree in Engineering from an accredited college or university with four (4) years acceptable experience as an engineer and who has successfully completed both levels of the Professional Engineers Examination administered by the State of New York Department of Education, Division of Professional Licensing.
- (61)Qualitative Fit Test: Individual test subject's responding (either voluntarily or involuntarily) to a chemical challenge outside the respirator face-piece. Three of the most popular methods include: (1) irritant smoke test; (2) odorous vapor test; and (3) taste test.
- (62)Quantitative Fit Test: Exposing the respiratory wearer to a test atmosphere containing an easily detectable, nontoxic aerosol, vapor or gas as the test agent. Instrumentation, which samples the test atmosphere and the air inside the face-piece of the respirator, is used to measure quantitatively the leakage into the respirator. There are a number of test atmospheres, test agents, and exercises to perform during the test.
- (63)Registered Architect (RA): Individual having, at a minimum, a Bachelor's Degree in Architecture from an accredited college or university with three (3) years acceptable experience as an architect and who has successfully completed both levels of the Architects Registration Examination administered by the State of New York Department of Education, Division of Professional Licensing.
- (64)Removal: Stripping of any asbestos-containing materials from surfaces or components of a structure or taking out structural components in accordance with 40 CFR 61 Subparts A and M.
- (65)Shower Room: Room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water controllable at the tap and arranged for complete showering during decontamination.

- (66)Small Asbestos Project: Asbestos project involving the disturbance (e.g. removal, enclosure, encapsulation) of more than 25-linear feet and less than 260-linear feet of friable ACM or more than 10-square feet and less than 160-square feet of friable ACM.
- (67)Staging Area: Work area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.
- (68)Structural Member: Load-supporting member of a facility, such as beams and load-supporting walls, or any nonload-supporting member, such as ceiling and nonload-supporting walls.
- (69)Surfactant: Chemical wetting agent added to water to improve penetration.
- (70)Visible Emissions: Emissions containing particulate material that are visually detectable without the aid of instruments.
- (71)Washroom: Room between the work area and the holding area in the equipment decontamination enclosure system where equipment and waste containers are wet cleaned and/or HEPA-vacuumed prior to disposal.
- (72)Wet Cleaning: Removal of asbestos fibers from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with amended water.
- (73)Work Area: Designated excavation, spaces, or areas within a trench or structure where asbestos abatement activities take(s) place.
- (74)Worker Decontamination Enclosure System: Portion of a decontamination enclosure system designed for controlled passage of workers and authorized visitors, consisting of a clean room, a shower room, and an equipment room separated from each other and from the work area by airlocks and curtained doorways.
- (75)Work Site: Area where abatement activity is being performed. May be composed of one or more work areas.

67.11.1.6 STANDARD OPERATING PROCEDURES

- (A) Develop and implement a written standard procedure for abatement work to ensure maximum protection and safeguard from asbestos exposure of the workers, visitors, employees, public, and environment.

(B) TELEPHONE PAGING DEVICE:

The Contractor or the Contractor's authorized representative shall, at all times during the normal workday or during periods of overtime work under this contract, carry a digital telephone paging device ("Beeper") and/or cellular telephones which can be activated by a telephone number in the 212 or 646 or 718 or 917 area code. The Contractor shall supply the Department of Design and Construction with the activation number for the device and the Contractor is liable to respond back to the calls from DDC within the next one (1) hour period after the Contractor receives calls from DDC. The cost to the Contractor for this device and all charges accruing thereto is deemed included in the price(s) bid for item(s) labeled, "INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE".

- (C) The standard operating procedure shall ensure:

- (1) Tight security from unauthorized entry into the workspace.
- (2) Restriction of Contractor's personnel to the immediate work area and access/egress routes.
- (3) Donning of proper protective clothing and respiratory protection prior to entering the work area.

- (4) Safe work practices in the work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking the respiratory protection.
 - (5) Proper exit practices from the work space to the outside through the showering and decontamination facilities.
 - (6) Removing asbestos in ways that minimize release of fibers.
 - (7) Packing, labeling, loading, transporting, and disposing of contaminated material in a way that minimize exposure and contamination.
 - (8) Emergency evacuation procedures, for medical or safety situations, to minimize the potential exposure to airborne asbestos fibers for emergency personnel, and building environment.
 - (9) Safety from accidents in the workspace, especially from electrical shocks, fall hazards associated with scaffolding, slippery surfaces, and entanglements in loose hoses and equipment.
 - (10) Provisions for effective supervision, air monitoring and personnel monitoring for exposure during the work.
 - (11) Engineering systems that minimize exposure to fibers within the workspace.
- (D) Provide an Asbestos Handler Supervisor to provide continuous supervision of all work, and to be responsible for the following:
- (1) Ensure that individuals are using proper personal protective equipment and are trained in its use.
 - (2) Maintain entry log records and ensure that they are recorded in accordance with the provisions of Title 15, Chapter 1 of RCNY.
 - (3) Surveillance of the work areas at a minimum of once per work shift or as required by Title 15, Chapter 1 of RCNY, to ensure that the workers personal protective equipment is not torn or ripped and that respiratory protection is worn at all times.
 - (4) Ensure that sufficient personal protective equipment is stored in the clean room.
 - (5) Take precautions to prevent heat stress. Precautions include, but are not limited to, selecting lightweight protective clothing, reducing the work rate, and providing adequate fluid breaks.
- (E) ENGINEERING CONTROLS:
- (1) The 8-hour time weighted average airborne concentration of fibers to which any passerby may be exposed shall not exceed 0.01-fibers per cubic centimeter of air when fibers have a physical dimension longer than 5-micrometers as determined by the method prescribed in these specifications.
 - (2) All large asbestos projects shall utilize negative pressure ventilation equipment.
 - (3) The negative pressure ventilation equipment shall operate continuously, 24-hours a day, from the establishment of isolation barriers through successful clearance air monitoring. If such equipment shuts off, adjacent areas shall be monitored for asbestos fibers.
 - (4) On loss of negative pressure or electric power to the negative pressure ventilating units, abatement shall stop immediately and shall not resume until power is restored and negative pressure ventilation equipment is operating again.

- (5) Negative pressure ventilation equipment shall be exhausted to the outside of the tent enclosure away from passer-by and/or sidewalks.
 - (a) At no time shall the negative pressure ventilation unit exhaust with 40-feet of a receptor or adversely affect the intake ports, louvers, or entrances for the adjacent buildings.
 - (b) Heavy duty ducting of equivalent, or larger, shape and dimension as that of the negative pressure ventilation exhaust port shall be used to exhaust to the structure.
 - (c) All ducting shall be sealed and braced or supported to maintain airtight joints.
- (6) Where ducting to the outside is not possible, a second negative pressure ventilation unit compatible with the primary unit's capacity shall be connected in series. The area receiving the exhaust shall have sufficient, nonrecycling exhaust capacity to the outside of the structure.
- (7) In the event that there is a failure of the containment system or a breach in the Isolation Barriers, all abatement work will cease and the Contractor will immediately correct the condition. Abatement work will not resume until the work area has been smoke tested by the third party laboratory and approved by the Project Monitor.

(F) LOCKDOWN ENCAPSULATION PROCEDURES:

The following procedures shall be followed to seal in nonvisible residue while conducting lockdown encapsulation on all surfaces from which ACM is removed:

- (a) Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 USEPA Contract shall be used for lockdown encapsulation.
- (b) The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon unless reviewed and approved by DEP.
- (c) Latex paint with solids content greater than 15-percent shall be considered a lockdown sealant for coating all nonmetallic surfaces.
- (d) Encapsulants shall be applied using airless spray equipment. Spraying is to occur at the lowest pressure range possible to minimize fiber release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.

67.11.1.7 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS

- (A) Erect bilingual (English-Spanish) warning signs around the excavation and at every point of potential entry from the street level which can be viewed by the public without obstruction, in accordance with OSHA 29 CFR 1926.1101 (K) (Sign Specifications) and Title 15, Chapter 1 of RCNY. The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than OSHA requirements.
- (B) Provide the required labels for all polyethylene bags and all drums utilized to transport contaminated material to the landfill in accordance with OSHA 29 CFR 1926.1101 (K)(2) and by 49 CFR Parts 171 and 172 of the Department of Transportation regulations.
- (C) Provide any other signs, labels, warnings, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. Post in a prominent and convenient place for the workers a copy of the latest applicable regulations from OSHA, EPA, NIOSH, State of New York and New York City and any additional items mandated for posting by the aforementioned regulations.
- (D) Furnish all permits, variances and notices required to perform the work.

67.11.1.8 EMERGENCY PRECAUTIONS

- (A) Establish emergency exit(s) from the work area. The clean side of all emergency exits shall be equipped with two full sets of protective clothing and respirators at all times.
- (B) Notify local medical emergency personnel, both ambulance crews and hospital emergency room staff prior to commencement of abatement operations as to the possibility of having to handle contaminated or injured workmen, and shall be advised on safe decontamination.
- (C) Prepare to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated immediately for decontamination. When an injury occurs, precautions shall be taken to reduce airborne fiber concentrations (i.e. misting of the air with water) until the injured person has been removed from the work area.
- (D) Notify, before actual removal of the asbestos material, the local police and fire departments to the danger of entering the excavated area where removal is taking place. Contractor shall make every effort to help these agencies form plans of action should their personnel need to enter the contaminated area.

67.11.1.9 SUBMITTALS**(A) Pre-Construction Submittals:**

Attend a pre-construction meeting scheduled by the City of New York Department of Design and Construction. This meeting shall also be attended by a designated representative of the City of New York third party air monitoring firm and the Engineer. At this meeting, the Contractor shall present three (3) copies of the following items, bound and indexed. The detailed plan of action must be submitted at least five (5) days prior to the pre-construction meeting.

- (a) Contractor's scope of work, work plan and schedule.
- (b) Notifications to Government Agencies.
- (c) Copies of permits, clearance and licenses if required.
- (d) Schedules: The Contractor shall provide to the Engineer a copy of the following schedules for approval. Once approved, schedules shall be maintained and updated as received. The Contractor shall post a copy of all schedules at the site:
 - (1) A construction schedule stating critical dates of the project including, but not limited to, mobilization, work area preparation, demolition, gross removal, fine cleaning, encapsulation, inspections, clearance monitoring, and phase of refinishing and final inspections. The schedule shall be updated biweekly, at a minimum.
 - (2) A schedule of staffing stating number of workers per shift per activity, name and number of supervisor(s) per shift, shifts per day, and total days to be worked.
 - (3) Submit all changes in schedule or staffing to the Engineer prior to implementation.
 - (4) A schedule of equipment to be used including numbers and types of all major equipment such as HEPA Air Filtration Units, HEPA-vacuums, airless sprayers, Water Atomizing Devices and Type "C" compressors.
- (e) A written plan and shop drawings for preparation of work site and decontamination chamber.
- (f) Description of protective clothing and approved respirator to be used, make, model, NIOSH approval numbers.

- (g) Delineation of responsibility of work site supervision, including competent person, with names, resumes, and home telephone numbers.
- (h) Explanation of decontamination sequence and isolation techniques.
- (i) Description of specific equipment to be utilized, including make and model number of air filtration devices, vacuums, sprayers, etc.
- (j) Description of any prepared methods, procedures, techniques, or equipment other than those specified in the contract documents.
- (k) Explanation of the handling of contaminated wastes including EPA and NYCDEP identification numbers of Waste Hauler.
- (l) Description of the final clean-up procedures to be used.
- (m) Name and qualifications of Contractor's testing laboratory including AIHA accreditation, and proof of NIOSH PAT and NIST/NVLAP Bulk Quality Assurance Proficiency of OSHA samples for approval by the City of New York Department of Design and Construction.
- (n) Written description of emergency procedures to be followed in case of injury or fire. This section must include evacuation procedures, source of medical assistance (name and telephone number) and procedures to be used for access by medical personnel (examples: first aid squad and physician). NOTE: Necessary Emergency Procedures Shall Take Priority Over All Other Requirements Of These Specifications.
- (o) Material Safety Data Sheets (MSDS) for encapsulants, sealants, firestopping foam, cleaners/disinfectants, spray adhesive and any and all potentially hazardous materials that may be employed on the project. No work involving the aforementioned will be allowed to proceed until MSDS are reviewed.
- (p) Worker Training And Medical Surveillance: Contractor shall submit a list of the persons who will be employed by The Contractor and the Contractor's Subcontractors in the removal work. Present evidence that workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.
- (q) Logs: Specimen copies of daily progress log, visitor's log, and disposal log.
 - (1) The Contractor shall provide a permanently bound log book of minimum 8-1/2" x 11" size at the entrance to the Worker and Waste Decontamination enclosure system as hereinafter specified. Log book shall contain on title page the project name, name, address and phone number of Environmental Control Representative; name, address and phone number of Abatement Contractor; name, address and phone number of Contractor and City's air testing entity; and, emergency numbers including, but not limited to local Fire/Rescue Department. Log book shall contain a list of personnel approved by the laboratory for entry into the work area.
 - (2) All entries into the log shall be made in nonwashable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted. Any significant events occurring during the abatement project shall be entered into the log. Upon completion of the job, the Contractor shall submit the logbook containing a day-to-day record of personnel log entries countersigned by the Project Monitor everyday.
- (r) Worker's Acknowledgments: Submit statements signed by each employee that the employee has received training in the proper handling of ACM understands the health implications and

risks involved; and understands the use and limitations of the respiratory equipment to be used.

(B) Submit copies of the following items to the Project Monitor during the work:

- (1) Security and safety logs showing names of person entering workspace, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.
- (2) Progress logs showing the number of workers, supervisors, hours of work and tasks completed shall be submitted daily to the Engineer.
- (3) Contractor's current work progress shall be submitted for review by the Engineer at weekly progress meetings.
- (4) All Contractors' air monitoring and inspection results.

(C) Project Closeout Submittals:

Upon completion of the project and as a condition of acceptance, the Contractor shall present two (2) copies of the following items, bound and indexed:

- (1) Lien Waivers from Contractor, Subcontractors and Suppliers,
- (2) Daily OSHA air monitoring results,
- (3) All Waste Manifests (Asbestos and Construction Debris), seals and disposal logs,
- (4) Field Sign-In/Sign-Out Logs for every shift,
- (5) A Letter of Compliance stating that all the work on this project was performed in accordance with the specifications and all applicable Federal, State and Local regulations,
- (6) All Warranties as stated in the specifications,
- (7) Fully executed disposal certificates and transportation manifest.

67.11.1.10 QUALITY ASSURANCE

- (A) All work required for the completion of this project or called for in this specification must be executed in a workmanlike manner by using the appropriate methods established by regulatory requirements and/or industrial standards. All workmanship or work methods are subject to review and acceptance by the Engineer. Throughout the specification, reference is made to codes and standards which establish qualities, levels or types of workmanship which will be considered acceptable. It is the Abatement Contractor's responsibility to comply with these codes and standards during the execution of this work.
- (B) All materials and equipment required or consumed during the work of this contract must meet the minimum acceptable criteria established by codes and standards referenced elsewhere in this specification. Materials and equipment must be submitted for prior approval as part of the Contractor's "Shop Drawings".
- (C) It is the Abatement Contractor's responsibility, when so required by the specification or upon written request from the Commissioner or the Commissioner's representative to furnish all required proof that workmanship, materials and/or equipment meet or exceed the codes and standards referenced. Such proof shall be in the form requested, typically a certified report or test conducted by a testing entity approved for that purpose by DDC.

- (D) The Contractor shall furnish proof that employees working under the Contractor's supervision have had instruction on the dangers of asbestos exposure, on respirator use, decontamination, and OSHA regulations. This proof shall be in the form of a notarized affidavit to the effect that the above requirements have been satisfied.
- (E) The Contractor will have at all times in the Contractor's possession and in view at the job site the OSHA regulations 29 CFR 1910.1001, and 1926.1101 Asbestos, and Environmental Protection Agency 40 CFR, Part 61, subpart B: National Emission Standard for asbestos, asbestos stripping, work practices and disposal of asbestos waste. The Contractor shall also have one copy of NYC Title 15, Chapter 1 of RCNY and NYS DOL ICR 56 at the job site at all times.
- (F) Familiarity With Pertinent Codes And Standards: In procuring all items used in this work, it is the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements, and are suitable for their intended use.
- (G) Rejection Of Noncomplying Items: The Commissioner reserves the right to reject items incorporated into the work that fail to meet the specified minimum requirements. The Commissioner further reserves the right, and without prejudice to other recourse that maybe taken, to accept noncomplying items subject to an adjustment in the contract amount as approved by the City.
- (H) Applicable Regulations, Codes And Standards: Applicable standards listed in these specifications include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:
- (1) United States Environmental Protection Agency (EPA or USEPA)
Region II
Asbestos NESHAPS Contact
Air And Waste Management Division
(Air Compliance Branch) - USEPA
290 Broadway, 21st Floor
New York, New York 10007-1866
212-637-3660
 - (2) Occupational Safety and Health Administration (OSHA)
Region II - Regional Office
201 Varick Street, Room 908
New York, New York 10014
212-337-2378
 - (3) National Electrical Code (NEC)
See NFPA
 - (4) National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, Massachusetts 02169-7471
617-770-3000
 - (5) National Institute for Occupational Safety and Health (NIOSH)
Robert A. Taft Laboratory
4676 Columbia Parkway
Mailstop R12 Cincinnati, Ohio 45226
513-841-4428
 - (6) Department of Health and Mental Hygiene (DOHMH)
Environmental Investigation
125 Worth Street
New York, New York 10013

212-442-3372

- (7) American National Standards Institute (ANSI)
(Successor to USASI and ASA)
25 West 43rd Street (between 5th and 6th Avenue), 4th Floor
New York, New York 10036
212-642-4900
- (8) American Society for Testing and Materials (ASTM)
100 Bar Harbor Drive
West Conshohocken, Pennsylvania 19428-2959
610-832-9500
- (9) New York City Department of Environmental Protection (NYCDEP)
Bureau of Environmental Compliance
Asbestos Control Program
59-17 Junction Boulevard, 8th Floor
Corona, New York 11368
718-595-3682
- (10) New York City Department of Sanitation
125 Worth Street, Room 714
New York, New York 10013
212-566-1066
- (11) New York State Department of Labor (NYSDOL)
Division Of Safety And Health
Engineering Services Unit
State Office Building Campus
Albany, New York 12240-0010
- (I) Post all applicable regulations in a conspicuous place at the job site. Assure that the regulations are not altered, defaced or covered by other materials. One copy of each regulation must also be kept at the Contractor's office.

67.11.1.11 CITY/CONTRACTOR RESPONSIBILITIES

- (A) The City will not enter the portions of the excavation, in which work is being performed during the entire asbestos removal operation, including completion of clean up.
- (B) The Contractor shall provide a plan for 24-hours job security both for prevention of theft and for barring entry of curious but unprotected personnel into work areas.
- (C) The Contractor shall provide own means of power if needed and the City will not be held responsible for the downtime due to faulty Contractor's equipment.
- (D) The Contractor shall provide, at Contractor's own expense, all electrical, water, and waste connections, tie-ins, extensions, and construction materials, supplies, etc. At the end of each shift, the Contractor shall disconnect all hoses within the work zone and place in equipment room of the worker decontamination unit. The Contractor shall ensure positive shutoff of all water to work area during nonworking hours.
- (E) All temporary facilities required to be installed, shall be subject to the approval of the Commissioner. Prior to starting the work at any site; specify clearly the temporary locations of facilities preferably with sketches and submit the same to the Engineer for approval.
- (F) The Contractor shall provide water needed to conduct the required asbestos abatement. All temporary plumbing or adaptations to supply the needs of the work area shall be installed and

removed by the Contractor and the cost thereof included in the unit price bid for abatement work. Shower water for the decontamination unit shall be provided hot. Heating of water, if necessary, shall be provided by the Contractor.

- (G) Any additional electrical equipment (i.e. transformers, etc.), which is necessary shall be at the Contractor's expense.
- (H) The Contractor shall provide fire protection in accordance with all State and Local fire codes.
- (I) Any parts of the service lines, within the excavated work area, disturbed or damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the Contractor to the satisfaction of the respective utility company.
- (J) Contractor shall supply hot shower water necessary for use in the decontamination unit.

67.11.1.12 USE OF THE AREA

- (A) The Contractor shall confine Contractor's apparatus, the storage of materials, and supplies, and the operation of the Contractor's workmen to limits established by law, ordinances, and the directions of the Engineer. All flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Engineer.
- (B) The Contractor shall assure of a clear path out of the excavated area, that appropriate safety barriers are established to prevent access, and that work areas are kept neat, clean, and safe.
- (C) All surrounding work, fixtures, soil lines, drains, water lines, gas pipes, electrical conduit, wires, utilities, etc. which are to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the City in accordance with the terms of this contract.
- (D) Attention is specifically drawn to the fact that other contractors, performing the work of other contracts, may be (or are) brought upon any of the work sites of this contract. Therefore, the Contractor shall not have exclusive rights to any site of work and shall fully cooperate and coordinate Contractor's work with the work of other contractors who may be on (or are on) any site of the work of this contract. Regulated area exempted.
- (E) Temporary toilet facilities must be provided by the Contractor on the site. Coordinate location of such facilities with the Engineer.

67.11.1.13 PROTECTION AND DAMAGE

- (A) The Contractor is responsible to cover and protect all equipment that cannot be removed from work areas.
- (B) No materials or debris shall be thrown within the excavated area.
- (C) Debris shall be removed from the work site daily. Work area shall be left neat and clean after each work shift, so that work may proceed the next regular workday without interruption. Limited bag storage may take place within the work area when approved by the Engineer.

67.11.1.14 RESPIRATORY PROTECTION REQUIREMENTS

- (A) Respiratory protection shall be worn by all individuals who may be exposed to asbestos fibers from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring in accordance with regulations and these specifications.
- (B) The Contractor shall develop and implement a written respiratory protection program with required site-specific procedures and elements. The program shall be administered by a properly trained

individual. The written respiratory protection program shall include the requirements set forth in OSHA Standard 29 CFR 1910.134, at a minimum.

- (C) The Contractor shall provide workers with individually issued and marked respiratory equipment. Respiratory equipment shall be suitable for the asbestos exposure level(s) in the work area(s), as specified in OSHA Standards 26 CFR 1910.134 and 29 CFR 1926.1101, NIOSH Standard 42 CFR 84, or as more stringently specified otherwise, herein.
- (D) Where respirators with disposable filter parts are employed, the Contractor will provide sufficient filter parts for replacement as necessary or as required by the applicable regulation.
- (E) All respiratory protection shall be NIOSH approved. All respiratory protection shall be provided by the Contractor, and used by workers in conjunction with the written respiratory protection program.
- (F) Contractor shall provide respirators selected by an Industrial Hygienist that meet the following requirements:

AIRBORNE CONCENTRATION OF ASBESTOS OR CONDITIONS OF USE	REQUIRED RESPIRATOR
Not in excess of 1-fibers per cubic centimeter (f/cc), ten (10) times Permissible Exposure Level (PEL)	Half-mask air purifying respirator, other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5-f/cc, 50 times PEL	Full face-piece air-purifying respirator equipped with high efficiency filters.
Not in excess of 100-f/cc, 1,000 times PEL	Powered air purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100-f/cc, 1,000 times PEL	Full face-piece supplied air respirator operate in pressure demand mode.
Greater than 1,000-f/cc, 10,000 times PEL, or unknown concentration	Full face-piece supplied air respirator operate in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

(G) Selection of high efficiency filters:

- (1) All high efficiency filters shall have a nominal efficiency rating of 100 (99.97-percent effective) when tested against 0.3-micrometer monodisperse diethyl-hexyl phthalate (DOP) particles.
- (2) Choose N-, R-, or P- series filters based upon the presence or absence of oil particles.
 - (a) N- series filters shall only be used for non-oil solid and water based aerosols or fumes.
 - (b) R- and P -series filters shall be used when oil aerosols or fumes (i.e., lubricants, cutting fluids, glycerin, etc.) are present. The R- series filters are oil resistant and the P- series filters are oil proof.
 - (c) Follow filter manufacture recommendations.
- (3) If a vapor hazard exists, use an organic vapor cartridge in combination with the high efficiency filter.

(H) Historical airborne fiber level data may serve as the basis for selection of the level of respiratory protection to be used for an abatement task. Historical data provided by the Contractor shall be based on personal air monitoring performed during work operations closely resembling the processes, type of material, control methods, work practices, and environmental conditions present at the site. Documentation of aforementioned results may be requested by the City and/or Testing

Laboratory for review. This will not relieve the Contractor from providing personal air monitoring to determine the time-weighted average (TWA) for the work under contract. The TWA shall be determined in accordance with 29 CFR 1926.1101.

- (I) At no time during actual removal operations shall half-mask air purifying respirators be allowed unless a full 8-hour TWA and excursion limit have been conducted, and reviewed by the Project Monitor. Use of single use dust respirators is prohibited for the above respiratory protection.
- (J) Workers shall be provided with personally issued and individually marked respirators. Respirators shall not be marked with any equipment that will alter the fit of the respirator in any way. Only waterproof identification markers shall be used.
- (K) The Contractor shall ensure that the workers are qualitatively or quantitatively fit tested by an Industrial Hygienist initially and every 12-months thereafter with the type of respirator the Contractor will be using.
- (L) Whenever the respirator design permits, workers shall perform the positive and negative air pressure fit test each time a respirator is worn. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.
- (M) No facial hairs (beards) shall be permitted to be worn when wearing respiratory protection that requires a mask-to-face seal.
- (N) If a worker wears glasses, a spectacle kit to fit their respirator shall be provided by the Contractor at the Contractor's expense.
- (O) Respiratory protection maintenance and decontamination procedures shall meet the following requirements:
 - (1) Respirators shall be inspected and decontaminated on a daily basis in accordance with OSHA 29 CFR 1910.134 (b); and,
 - (2) High efficiency filters for negative pressure respirators shall be changed after each shower; and,
 - (3) Respiratory protection shall be the last piece of worker protection equipment to be removed. Workers must wear respirators in the shower when going through decontamination procedures as stated in Subsection 67.11.3.3; and,
 - (4) Airline respirators with high efficiency filtered disconnect shall be disconnected in the equipment room and worn into the shower. Powered air-purifying respirator face pieces shall be worn into the shower. Filtered/power pack assemblies shall be decontaminated in accordance with manufacturers recommendations; and,
 - (5) Respirators shall be stored in a dry place and in such a manner that the face-piece and exhalation valves are not distorted; and,
 - (6) Organic solvents shall not be used for washing of respirators.
- (P) Authorized visitors shall be provided with suitable respirators and instruction on the proper use of respirators whenever entering the work area. Qualitative fit test shall be done to ensure proper fit of respirator.

67.11.1.15 PROTECTIVE CLOTHING

- (A) Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work. Provide to all workers, foremen, superintendents, authorized visitors and inspectors, protective disposable clothing consisting of full-body coveralls, head covers, gloves and 18-inch high boot type covers or reusable footwear.

(B) In addition to personal protective equipment for workers, the Contractor shall make available at each worksite at least four (4) additional uniforms and required respiratory equipment each day for personnel who are authorized to inspect the work site. The Contractor shall also provide, for the duration of the work at any site involving a decontamination unit for worksite access, a lockable storage locker for use by the Engineer. In addition to respiratory masks for workers, the Contractor must have on hand at the beginning of each work day, at least four (4) masks each with two (2) sets of fresh filters, for use by personnel who are authorized to inspect the worksite. The Contractor shall check for proper fit of the respirators of all City personnel authorized to enter the work area.

(C) Asbestos handlers involved in tent procedures shall wear two (2) disposable suits, including gloves, hood and footwear, and appropriate respiratory equipment. All street clothes shall be removed and stored in a clean room within the work site. The double layer personal protective equipment shall be used for installation of the tent and throughout the procedure, if a decontamination unit (with shower and clean room) is contiguous to the work area, only one (1) layer of disposable personal protective equipment shall be required; in this case, prior to exiting the tent the worker shall HEPA vacuum and wet clean the disposable suit.

The outer disposable suit (if two (2) suits are worn) shall be removed and remain in the tent upon exiting. Following the tent disposal and work site clean up the workers shall immediately proceed to a shower at the work site. The inner disposal unit and respirator shall be removed in the shower after appropriate wetting. The disposal clothing shall be disposed of as asbestos-containing waste material. The workers shall then fully and vigorously shower with supplied liquid bath soap, shampoo, and clean dry towels.

(D) Coveralls: Provide disposable full-body coveralls and disposable head covers. Require that they be worn by all workers in the work area. Provide a sufficient number for all required changes for all workers in the work area.

(E) Boots: Provide work boots with non-skid soles, and where required by OSHA, foot protection, for all workers. Provide boots at no cost to workers. Paint uppers of all boots yellow with waterproof enamel. Do not allow boots to be removed from the work area for any reason after being contaminated with ACM and/or dust.

(F) Hard Hats: Provide hard hats as required by OSHA for all workers, and provide a minimum of four (4) spares for Inspectors, visitors, etc. Label all hats with same warning label as used on disposal bags. Require hard hats to be worn at all times that work is in progress that may cause potential head injury. Provide hard hats of the type with polyethylene strap suspension. Require hats to remain in the work area throughout the work. Thoroughly clean and decontaminate and bag hard hats prior to removing them from the work area at the end of the work.

(G) Goggles: Provide eye protection (goggles) as required by OSHA for all workers involved in any activity that may potentially cause eye injury. Require them to be worn at all times during these activities. Thoroughly clean and decontaminate goggles before removing them from the work area.

(H) Gloves: Provide work gloves to all workers, of the type dictated by the work and OSHA Standards. Do not remove gloves from the work area. Dispose of as asbestos-contaminated waste at the end of the work. Gloves shall be worn at all times, except during work area preparation activities that do not disturb ACM.

(I) Reusable footwear, hard hats and eye protection devices shall be left in the contaminated Equipment Room until the end of the asbestos abatement work.

(J) Disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the workspace to the outside through the decontamination facility.

- (K) Respirators, disposable coveralls, head covers and foot covers shall be provided by the Contractor for the Project Monitor, Engineer and any other authorized representative who may inspect the work area. Provide two (2) respirators and six (6) respirator filter changes per day.

67.11.1.16 AIR MONITORING - CONTRACTOR

- (A) The Contractor shall employ a qualified Industrial Hygiene Laboratory to analyze air samples in accordance with OSHA Regulations, 1926.1101 (Asbestos Standards for Construction) and New York City regulations. All costs for this work shall be deemed included in the price(s) bid for item(s) labeled, "INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE".
- (B) The Industrial Hygiene Laboratory shall be a current proficient participant in the American Industrial Hygiene Association (AIHA) PAT Program. The laboratory identification number shall be submitted and approved by the City. The laboratory shall be accredited by the AIHA and New York State Department of Health Environmental Laboratory Approval Program (ELAP).
- (C) The Industrial Hygiene Laboratory shall also be a current proficient participant in the NIST/NVLAP Quality Assurance Program for the identification of bulk samples. Laboratory identification number shall be submitted to and approved by the City.
- (D) The Contractor shall require a competent person (as defined in OSHA 1926.1101) to perform the following functions and to be on-site continuously for the duration of the project:
- (1) Monitor the set up of the work area enclosure and ensure its integrity.
 - (2) Control entry and exit into the work enclosure.
 - (3) Ensure that employees are adequately trained in the use of engineering controls, proper work practices, proper personal protective equipment and in decontamination procedures.
 - (4) Insure that employees use proper engineering controls, proper work practices, proper personal protective equipment and proper decontamination procedures.
 - (5) The competent person (as defined in OSHA1926.1101) shall check for rips and tears in work suits, and ensure that they are mended immediately or replaced.
- (E) Air monitoring responsibilities, shall be performed by a representative of the testing laboratory retained by the Contractor.
- (F) Contractor shall submit to the City all credentials of the designated (as defined in OSHA 1926.1101) and Industrial Hygiene Laboratory representative for approval.
- (G) Air monitoring and inspection shall be conducted by the Contractor's competent person (as defined in OSHA 1926.1101).
- (H) Continuous (daily or per shift) monitoring and inspection will include work area samples, personnel samples from the breathing zone of a worker to accurately determine the employees' 8-hour TWA (unless Type C respirators are used) and decontamination unit clean room samples.
- (I) Work area samples and employee personnel samples shall be taken using pumps whose flow rates can be determined to an accuracy of ± 5 -percent, at a minimum of two (2) liters per minute. This must be demonstrated at the job site.
- (J) Sampling and analysis methods shall be per NIOSH 7400A.
- (K) Test Reports:

- (1) Promptly process and distribute one (1) copy of the test results, to the Commissioner.
- (2) Prompt reports are necessary so that if required, modifications to work methods and/or practices may be implemented as soon as possible.
- (3) Contractor shall by facsimile notify the Commissioner within 24-hours of the results of each test, followed by written notification within three (3) days.
- (L) The Contractor's competent person shall conduct inspections and provide written reports daily. Inspections will include checking the standard operating procedures, engineering control systems, respiratory protection and decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project which may affect the health and safety of the people and environment.
- (M) All costs for required air monitoring by the Contractor's competent person shall be borne by the Contractor.
- (N) The City reserves the right to conduct air and surface dust sampling in conjunction with and separate from the Testing Laboratory for the purposes of Quality Assurance.
- (O) All samples shall be accompanied by a Chain of Custody Record that shall be submitted to the Project Monitor upon completion of analysis.

67.11.1.17 TESTING LABORATORY

- (A) The City, at its own expense, will employ the services of an Independent Testing Laboratory. The Testing Laboratory will perform air sampling activities at the site and perform periodic observations of the work site.
- (B) The Laboratory will perform analysis of air samples utilizing phase contrast microscopy (PCM) and/or transmission electron microscopy (TEM). This laboratory shall meet the standards stated herein.
- (C) Observations will include, but not be limited to, checking the standard operating procedures, engineering control systems, respiratory protection, decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project that may affect the health and safety of the environment, Contractor, and/or facility occupants.
- (D) The Testing Laboratory shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the Contractor to verify that said performance complies with this specification. The Testing Laboratory shall be on site throughout the entire abatement operation.
- (E) The City will be responsible for costs incurred with the required laboratory work. Any subsequent additional testing required due to limits exceeded during initial testing shall be paid for by the Contractor.
- (F) At a minimum, air sampling shall be conducted in accordance with the following schedule:

ABATEMENT ACTIVITY	PRE-ABATEMENT	DURING ABATEMENT	POST- ABATEMENT
Equal to or greater than 10,000-square feet or 10,000-linear feet of ACM	PCM	PCM	TEM
Less than 10,000-square feet or 10,000-linear feet of ACM	PCM	PCM	PCM
Exceptions to the above:			
Boiler Rooms	PCM	PCM	PCM
Tent and Glovebag Procedures	PCM	PCM	PCM

ABATEMENT ACTIVITY	PRE-ABATEMENT	DURING ABATEMENT	POST- ABATEMENT
Demolitions	PCM	PCM	PCM

Note: TEM is acceptable wherever PCM is required.

(G) Prior to commencement of abatement activities, the Testing Laboratory will collect a minimum number of area samples inside each homogeneous work area.

- (1) Samples will be taken during normal activities and circumstances at the work site.
- (2) Samplers shall be located within the proposed work area and at all proposed isolation barrier locations.
- (3) Samples shall be analyzed using PCM.
- (4) The number of samples to be collected will be determined by the size of the project.

(H) Area air sampling during abatement shall be conducted as specified in the following documents except as restricted or modified herein:

- (1) Measuring Airborne Asbestos Following An Abatement Action, US EPA document 600/4-85-049 (Nov., 1985);
- (2) Guidance For Controlling Asbestos-Containing Materials In Buildings; US EPA Publication 560/5-85-024 (June, 1984);
- (3) Methodology For The Measurement Of Airborne Asbestos By Electron Microscopy, US EPA Contract No. 68-02-3266;
- (4) Mandatory And Nonmandatory Electron Microscopy Methods, set forth in 40 CFR Part 763, Subpart E, Appendix A;
- (5) NIOSH 7400 method using "A" counting rules.

(I) In accordance with the above criteria, area samples (see NYCDEP Asbestos Control Program Regulations) shall conform to the following schedule:

AREA SAMPLES FOR ANALYSIS BY	MINIMUM VOLUME	FLOW RATE
PCM, 25-mm cassettes	560-liters	5 to 15-liters/minute
TEM, 25-mm cassettes	560-liters	1 to 10-liters/minute
TEM, 37-mm cassettes	1,250-liters	1 to 10-liters/minute

- (1) All costs resulting from additional air tests and observations shall be borne by the Contractor. These costs may include, but are not limited to, labor, analysis fees, materials, and expenses.
- (2) After the area has been found to be in compliance, the Contractor may remove Isolation Barriers, tents if any and perform final cleaning as specified.

(J) Clearance And Excavation Re-entry Criteria:

- (1) The clearance criteria shall be applied to each excavated work area independently.
- (2) For PCM analysis, the clearance air monitoring shall be considered satisfactory when all of the samples regardless of the size of the project are less than or equal to 0.01-f/cc or the background concentrations, whichever is greater.

- (3) For TEM analysis, the clearance air monitoring shall be considered satisfactory when the requirements stated in 40 CFR Part 763, Subpart E, Appendix A, Section IV are met.
- (4) As soon as the air monitoring tests are completed, the Testing Laboratory will send the results of such tests to the City and notify the Contractor.
- (5) The Contractor shall cooperate fully with all aspects of air monitoring operations.

67.11.1.18 TAMPERING WITH TEST EQUIPMENT

All parties to this contract are hereby notified that any tampering with testing equipment will be considered an attempt at falsifying reports and records to federal and state agencies and each offense will be prosecuted under applicable state and federal criminal codes to the fullest extent possible.

67.11.2 PRODUCTS

67.11.2.1 MATERIALS

- (A) Wetting Agents: Surfactant shall consist of resin materials in a water base, that have been tested to ensure materials are nontoxic and nonhazardous. Surfactants shall be installed according to the manufacturer's written instructions.
- (B) Encapsulants (Sealants, Lockdown Encapsulants): Encapsulants shall consist of pigmented (nontransparent) liquid material which can be applied to asbestos containing materials or bare surfaces exposed after an abatement which temporarily controls the possible release of asbestos fibers from the material or surface either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). The encapsulant shall be installed according to the manufacturer's written instructions. Sealing materials to be applied to structural members and decking assemblies scheduled to receive spray-applied fireproofing shall be approved by UL for use with the specified material.
- (C) Fire Retardant Polyethylene Sheeting: Minimum uniform thickness of 6-mil. Provide largest size possible to minimize seams.
- (D) Fire Retardant Reinforced Polyethylene Sheeting: For covering floor of decontamination units, provide translucent, nylon reinforced or woven polyethylene laminated, fire retardant polyethylene sheeting. Provide largest size possible to minimize seams, minimum uniform thickness 6-mil.
- (E) Drums: Asbestos-transporting drums, sealable and clearly marked with warning labels as required by OSHA and EPA.
- (F) Polyethylene Disposal Bags: Asbestos disposal bags, minimum of 6-mil thick. Bags shall be clearly marked with warning labels as required by OSHA and EPA.
- (G) Signs: Asbestos warning signs for posting at perimeter of work area, as required by OSHA and EPA.
- (H) Waste Container Bag Liners And Flexible Trailer Trays: One piece leak-resistant flexible tray with absorbent pad.
- (I) Tape: Provide tape which is of high quality with an adhesive that is formulated to aggressively stick to sheet polyethylene.
- (J) Spray Adhesive: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
- (K) Flexible Duct: Spiral reinforced flex duct for air filtration devices.

- (L) Protective Clothing: Workers shall be provided with sufficient sets of properly fitting, full-body, disposable coveralls, head covers, gloves, and 18-inch high boot-type foot covers. Protective clothing shall conform to OSHA Standard 29 CFR 1926.1101.

67.11.2.2 TOOLS AND EQUIPMENT

- (A) Air Filtration Device (AFD): AFDs shall be equipped with High Efficiency Particulate Air (HEPA) filtration systems and shall be approved by and listed with Underwriter's Laboratory.
- (B) Transportation Equipment: Transportation Equipment, as required, shall be suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any temporary storage containers positioned outside the excavated work area for temporary storage shall be metal, closed and locked.
- (C) Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems.
- (D) Vacuum Attachments: Soft Brush Attachment, Asbestos Scraper Tool, Drill Dust Control Kit.
- (E) Electric Sprayer: An electric airless sprayer suitable for application of encapsulating material and shall be approved by and listed with Underwriters Laboratory.
- (F) Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for amended water application.
- (G) Water Atomizer: Powered air-misting device equipped with a ground fault interrupter and equipped to operate continuously.
- (H) Brushes: All brushes shall have nylon bristles. Wire brushes are excluded from use due to their potential to shred asbestos fibers into small, fine fibers. Wire brushes may be used for cleaning pipe joints within glove-bags upon written approval of the Engineer.
- (I) Hand Power Tools: Shall be equipped with HEPA-filtered local exhaust ventilation if used to drill, cut into or otherwise disturb ACM.
- (J) Other Tools And Equipment: The Contractor shall provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to: hand-held scrapers, sponges, rounded-edge shovels, brooms, and carts.
- (K) Fans And Leaf Blower: Provide Leaf Blower (one leaf blower per floor) and one 20-inch diameter fans for each 10,000-cubic feet of work area volume to be used for aggressive sampling technique for clearance air testing.
- (L) Fire Extinguishers: Provide type "A" fire extinguishers in spaces where there is minimal danger of electrical or grease-oil-flammable liquid fires. In other areas, provide type "ABC" dry chemical extinguishers of NFPA recommended types for the exposure in each case. All fire extinguishers shall comply with the applicable recommendations of NFPA Standard 10, "Standard For Portable Extinguishers." Provide a minimum of four (4) fire extinguishers in each work area; one in the equipment room of the decontamination unit, one outside the work area in the clean room or directly outside same, and two fire extinguishers where they are most effective for their intended purpose. Do not exceed seventy-five (75) feet between fire extinguishers within the workarea.
- (M) First Aid Kits: The Contractor shall maintain adequately stocked first aid kits in the clean rooms of the decontamination units and within work areas. The first aid kit shall be approved by a licensed physician for the work to be performed under this contract.
- (N) Water Service:

Water Heater: Provide UL rated 40-gallon electric water heaters to supply hot water for Personal Decontamination Enclosure System Shower. Wiring of the water heater shall comply with NEMA, NECA, and UL standards.

(O) Telephone Paging Device:

The Contractor or the Contractor's authorized representative shall, at all times during the normal workday or during periods of overtime work under this contract, carry a digital telephone paging device (Beeper). The device shall be activated by a telephone number in the 718, 212, 646, 917, 800, or 888 area codes. The Contractor shall supply the City with the activation number for the device and respond to calls from the City within one (1) hour. The cost to Contractor for this device and all charges accruing thereto is deemed included in the price(s) bid for item(s) labeled, "INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE".

67.11.2.3 CLEANING

(A) Throughout the construction period, the Contractor shall maintain the work area as described in this section.

(1) The Contractor shall prevent excavated areas other than the work area from becoming contaminated with asbestos-containing dust or debris. Should areas outside the work area become contaminated with asbestos-containing dust or debris as a consequence of the Contractor's work practices, the Contractor shall be responsible for cleaning these areas in accordance with the procedures appended in Title 15, Chapter 1 of RCNY and NYSDOL ICR56. All costs incurred in cleaning or otherwise decontaminating nonwork areas and the contents thereof shall be borne by the Contractor at no additional cost to the City.

(2) The Contractor shall provide to all personnel and laborers the required equipment and materials needed to maintain the specified standard of cleanliness.

(B) General:

(1) Waste water from asbestos removal operations, including shower water, may be discharged into the public sewer system only after approved filtration is on operation to remove asbestos fibers.

(2) Asbestos wastes shall be double bagged in six (6) mil (0.006") polyethylene bags approved for ACM disposal and shall be properly labeled and handled before disposal.

(3) The Contractor shall use corrugated cartons or drums for disposal of asbestos-containing waste having sharp edged components (e.g. nails, screws, metal lathe and tin sheeting) that may tear polyethylene bags and sheeting. The waste within the drums or cartons must be double bagged.

(4) The Contractor shall transport all bags of waste to disposal site in thirty (30) gallon capacity metal or fiber drums with tight lids, or in locked steel dumpster.

(5) Dumping of debris, waste or bagged waste will not be permitted.

(6) Cleanup of visible accumulations of loose ACM shall occur whenever there is a sufficient amount to fill a single asbestos bag.

(7) ACM shall be collected utilizing rubber dust pans and rubber squeegees.

(8) HEPA vacuums shall not be used on wet materials unless specifically designed for that purpose.

(9) Metal shovels shall not be used within the work area.

(10) Accumulations of dust shall be cleaned off all surfaces of the work area daily.

- (11) Mastic solvent when used will be applied in moderation (e.g. by airless sprayer).
- (12) The Contractor shall retain all items in the storage area in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection of all materials.
- (13) The Contractor shall not allow accumulation of scrap, debris, waste material, and other items not required for use in this work. Asbestos contaminated waste must not be kept on the work site overnight.
- (14) At least twice a week (more if necessary), the Contractor shall completely remove all scrap, debris and waste material from the job site.
- (15) The Contractor shall provide adequate storage space for all items awaiting removal from the job site, observing all requirements for fire protection and concerns for the environment.
- (16) All respiratory protection equipment shall be selected from the latest NIOSH Certified Equipment list.
- (17) Daily and more often, if necessary, the Contractor shall inspect the work areas and adjoining spaces, and pick up all scrap, debris, and waste material. All such items shall be removed to the place designated for their storage.
- (18) Weekly, and more often, if necessary, the Contractor shall inspect all arrangements of materials stored on the site; re-stack and tidy them or otherwise service them to meet the requirements of these specifications.
- (19) The Contractor shall maintain the site in a neat and orderly condition at all times.

67.11.3 EXECUTION

67.11.3.1 WORKER DECONTAMINATION FACILITY

(A) Large Asbestos Projects (Small Project Option):

Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Worker decontamination shall be in accordance of the NYCDEP approved procedure for removing asbestos containing coal tar wrap.

(a) Structure:

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16-inches on-center.
- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
- (3) Interior shall be covered with two (2) layers of opaque 6-mil polyethylene sheeting, with a minimum overlap of 12-inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve (12) inches.
- (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into work area.

- (b) Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
- (c) Air Locks: Air locks shall consist of two curtained doorways placed a minimum of three (3) feet apart.
- (d) Decontamination Enclosure System shall be placed adjacent to the work area and shall consist of three (3) totally enclosed chambers, separated from work area and each other by airlocks, as follows:
 - (1) Equipment Room: The equipment room shall have a curtain doorway to separate it from the work area, and share a common airlock with the shower room. The equipment room shall be large enough to accommodate at least one (1) worker (allowing them enough room to remove their protective clothing and footwear), and a 6-mil disposal bag for collection of discarded clothing and equipment. The equipment room shall be utilized for the storage of equipment and tools after decontamination using a HEPA-vacuum and/or wet cleaning. A one-day supply of replacement filters, in sealed containers, for HEPA-vacuums and negative air machines, extra tools, containers of surfactant, and other materials and equipment required for the project shall be stored here. A walk-off pan filled with water shall be placed in the work area just outside the equipment room for persons to clean foot coverings when leaving the work area. Contaminated footwear and reusable work clothing shall be stored in this room.
 - (2) Shower Room: The shower room shall have two (2) airlocks (one that separates it from the equipment room and one that separates it from the clean room). The shower room shall contain at least one (1) shower, with hot and cold water adjustable at the tap, per eight (8) workers. Careful attention shall be given to the shower to ensure against leaking of any kind. Contractor shall supply towels, shampoo and liquid soap in the shower room at all times. Shower water shall be drained collected, and filtered through a system with at least a 5-micron particle size collection capacity. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filters by large particles. Filtered water shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.
 - (3) Clean Room: The clean room shall share a common airlock with the shower room and shall have a curtained doorway to separate it from outside noncontaminated areas. Lockers, for storage of workers' street clothing, and shelves, for storing respirators, shall be provided in this area. Clean disposable clothing, replacement filters for respirators, and clean dry towels shall be provided in the clean room. The clean room shall not be used for the storage of tool, equipment or other materials.

(B) Small Asbestos Projects:

Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the work areas.

(a) Structure:

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16-inches on-center.
- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
- (3) Interior shall be covered with two (2) layers of opaque 6-mil polyethylene sheeting, with a minimum overlap of 12-inches at seams. Seal seams airtight using tape and adhesive.

The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve (12) inches.

- (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into work area.
 - (b) Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
 - (c) Air Locks: Air locks shall consist of two (2) curtained doorways placed a minimum of three (3) feet apart.
 - (d) Decontamination Enclosure System shall be placed adjacent to the work area and shall consist of three (3) totally enclosed chambers, separated from work area and each other by airlocks, as follows:
 - (1) Shower Room: The shower room shall have two (2) airlocks (one that separates it from the work area and one that separates it from the clean room). The shower room shall contain at least one (1) shower, with hot and cold water adjustable at the tap, per eight (8) workers. Careful attention shall be given to the shower to ensure against leaking of any kind. The Contractor shall supply towels, shampoo and soap in the shower room at all times. Shower water shall be drained collected, and filtered through a system with at least a 5-micron particle size collection capacity. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filters by large particles. Filtered water shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.
 - (2) Clean Room: The clean room shall share a common airlock with the shower room and shall have a curtained doorway to separate it from outside noncontaminated areas. Lockers, for storage of workers' street clothing, and shelves, for storing respirators, shall be provided in this area. Clean disposable clothing, replacement filters for respirators, and clean dry towels shall be provided in the clean room. The clean room shall not be used for the storage of tools, equipment or other materials.
- (C) Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Contractor, and as specified herein.

67.11.3.2 WASTE DECONTAMINATION FACILITY

(A) Large Asbestos Project (Small Project Option):

Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the work areas.

(a) Structure:

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16-inches on-center.
- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
- (3) Interior walls shall be covered with two (2) layers of opaque 6-mil polyethylene sheeting, with a minimum overlap of 12-inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-

retardant polyethylene sheeting with a minimum overlap on the walls of twelve (12) inches.

- (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into the work area.
 - (b) Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
 - (c) Air Locks: Air locks shall consist of two (2) curtained doorways placed a minimum of three (3) feet apart.
 - (d) Decontamination Enclosure System shall be placed adjacent to the work area and shall consist of three (3) totally enclosed chambers, separated from the work area and each other by airlocks, as follows:
 - (1) Washroom: An equipment washroom shall have two (2) air locks (one separating the unit from the work area and one common air lock that separates it from the holding area. The washroom shall have facilities for washing material containers and equipment. Gross removal of dust and debris from contaminated material containers and equipment shall be accomplished in the work area, prior to moving to the washroom.
 - (2) Holding Area: A holding area shall share a common air lock with the equipment washroom and shall have a curtained doorway to outside areas. A hinged, lockable door shall be placed at the holding area entrance to prevent unauthorized access into the work area.
- (B) Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Contractor, and as specified herein.

67.11.3.3 PERSONNEL ENTRANCE AND DECONTAMINATION PROCEDURES FOR REMOVAL OPERATIONS UTILIZING REMOTE DECONTAMINATION FACILITIES

- (A) All individuals who enter the work area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall fully identify the facility, agents, contractor(s), the project, each work area, and worker respiratory protection employed. The job supervisor shall be responsible for the maintenance of the log during the abatement activity.
- (B) Each worker shall remove street clothes in the clean room; wear two (2) disposable suits, including gloves, hoods and non-skid footwear; and put on a clean respirator (with new filters) before entering the work area.
- (C) Each worker shall, before leaving the work area or tent, clean the outside of the respirators and outer layer of protective clothing by wet cleaning and/or HEPA-vacuuming. The outer disposable suit shall be removed in the airlock prior to proceeding to the Worker Decontamination Unit. The inner disposable suit and respirator shall be wet wiped and HEPA-vacuumed thoroughly before removing and prior to aggressive shower.
- (D) Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately.

67.11.4 PREPARATION OF WORK AREA AND REMOVAL PROCEDURES

67.11.4.1 REMOVAL OF ASBESTOS-CONTAINING MATERIAL

- (A) Contractor shall be responsible for the proper removal of ACM from the work area using standard industry techniques. The Testing Laboratory representative shall observe the work.

General Requirements:

- (a) Removal of ACM shall be performed using wet methods. Dry removal of ACM is prohibited.
- (b) Spray ACM with amended water with sufficient frequency and quantity to enhance penetration. Sufficient time shall be allowed for amended water to penetrate the material to the substrate prior to removal. All ACM shall be thoroughly wetted while work is being conducted.
- (c) Accumulation of standing water on the floor of the work area is prohibited.
- (d) Apply removal encapsulants, when used, in accordance with the manufacturer's recommendations and guidelines.
- (e) Containerize ACM immediately upon detachment from the substrate.
- (f) Pre-Removal Inspections:
 - (1) Prior to removal of any ACM, the Contractor shall notify the Testing Laboratory and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Testing Laboratory.
 - (2) Contractor shall correct any deficiencies observed by Testing Laboratory at no additional cost to City.
 - (3) Following the Testing Laboratory's approval of the work area preparations, removal of ACM may commence.

- (B) Removal of Coal Tar Wrap shall be as follows:

Work shall be performed as outlined in the coal tar wrap removal procedures (see Appendix) approved by the New York City Department of Environmental Protection (NYCDEP).

67.11.4.2 MAINTENANCE OF CONTAINED WORK AREA AND DECONTAMINATION ENCLOSURE SYSTEMS

- (A) Ensure that barriers are installed in a manner appropriate to the expected weather conditions during the project and for its duration. Repair damaged barriers and remedy defects immediately upon their discovery. Visually inspect barriers at the beginning and end of each work period.
- (B) Visually inspect nonwork areas and the decontamination enclosure system for water leakage. Perform the visual inspection a minimum of two (2) times for each 8-hour work shift.

67.11.5 ASBESTOS WASTE MANAGEMENT

67.11.5.1 ACM WASTE REQUIREMENTS

- (A) The Contractor and all subcontractors are specifically alerted to the illegal practice of combining asbestos-containing waste (ACW) from one project with the ACW of other projects without using the services of a permitted waste transfer station as defined by 6 NYCRR Part 360 and 364. As part of the shop drawing submittals, the Contractor must submit for approval the proposed method of transportation and disposal that will be utilized to manage the ACW of this contract. If a permitted transfer station is to be used, the cost shall be included in the bid price. The Contractor must submit

a waste manifest consistent with whatever approved method is utilized as part of the invoicing and payment procedures.

- (B) The Contractor shall maintain compliance with the strictest set of regulations of Title 15, Chapter 1 of RCNY, NYC LL 70/85, NYS DOL ICR 56, USEPA, Asbestos Regulation 40 CFR Section 61.152, 29 CFR 1926.1101, 29 CFR 1910.1200 (F) of OSHA's Hazard Communication Standards, and other applicable standards.

NOTE: Any penalties incurred for failure to comply with any of the above regulations and/or fines imposed due to negligence of the Contractor will be the sole responsibility of the Contractor.

When presenting ACW for storage at the generation site, the Contractor shall:

- (1) Wet down ACW in a manner sufficient to prevent all visible emissions of dust into the air.
- (2) Seal material in a leak tight container while wet.
- (3) Keep ACW separate from any other waste.

- (C) When presenting ACW for storage away from the site of generation, the Contractor shall:

- (1) Ensure that ACW has been properly packaged as per requirements above.
- (2) Examine the containers of ACW to ensure that there are no breaks in the containers and that no visible dust is being released into the air.
- (3) If examination reveals damage to a container of ACW the Contractor or person accepting the waste shall immediately wet down the ACW and repackage it into a clean leak tight container. The subsequent repackaging shall be the financial responsibility of the Contractor and occur at no extra cost to the City.
- (4) Keep ACW separate from any other waste.

- (D) When storing ACW - The Contractor shall:

- (1) Ensure that the ACW has been sufficiently wetted down in tight containers.
- (2) Rewet and repackage any damaged containers.
- (3) Maintain at storage site an adequate supply of spare leak tight containers.
- (4) Maintain at storage site an adequate supply of amended water.
- (5) Keep ACW separate from any other waste.
- (6) Keep ACW in a secured, enclosed, and locked container.
- (7) If the Contractor has intention of sorting a quantity of ACW greater than or equal to 50-cubic yards, the Contractor shall:

Submit a written request and receive written approval from the City.

- (E) When presenting for transport, the Contractor shall:

- (1) Ensure that ACW has been sufficiently wetted down.
- (2) Examine the integrity of the container's airtight seal.

- (3) Rewet and repackage any damaged containers.
- (4) Keep ACW separate from all other waste.
- (5) Ensure that a person transporting asbestos waste holds a valid permit issued pursuant to law.
- (6) Frequency of waste removal:

Properly packaged and labeled asbestos waste shall be removed from the site on a daily basis. Under no circumstance shall asbestos waste be stored on site without written approval from the City. The Waste Hauler and landfill shall be as indicated on the notifications to regulatory agencies.

(F) Waste Load-Out Through Equipment Decontamination Enclosure (Full Decontamination Facility): Place asbestos waste in disposal bags. Large items not able to fit into disposal bags shall be wrapped in one (1) layer of 6-mil thick polyethylene sheeting. Clean outer covering of asbestos waste package by wet cleaning and/or HEPA-vacuuming in a designated part of the work area. Move wrapped asbestos waste to the equipment washroom, wet clean each bag or object and place it inside a second disposal bag, or a second layer of 6-mil polyethylene sheeting, as the item's physical characteristics demand. Air volume shall be minimized, and the bags or sheeting shall be sealed airtight with tape.

- (1) The clean containerized items shall be moved to the equipment decontamination enclosure holding area pending load-out to storage or disposal facilities.
- (2) Workers who have entered the equipment decontamination enclosure system from the uncontaminated nonwork area shall perform load-out of containers from the decontamination enclosure holding area. Dress workers moving asbestos waste to storage or disposal facilities in clean overalls of a color different than from that of coveralls used in the work area. Ensure that workers do not enter from uncontaminated areas into the equipment washroom or the work area. Ensure that contaminated workers do not exit the work area through the equipment decontamination enclosure system.
- (3) Thoroughly clean the equipment decontamination enclosure system immediately upon completion of the waste load-out activities, and at the completion of each work shift.
- (4) Labeled ACM waste containers or bags shall not be used for non-ACM debris or trash. Any materials placed in labeled containers or bags, including those turned "inside-out", shall be handled and disposed of as ACM waste.

(G) All asbestos materials, wastes, shower water, polyethylene, disposable equipment and supplies shall be disposed of as contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York Department of Environmental Conservation and New York City Department of Sanitation.

(H) All asbestos materials shall be prepared for transportation in accordance with this specification and all applicable Federal, State, County and City Regulations. The Contractor shall submit the following documentation:

- (1) Where applicable, an EPA Generator's identification number which has been obtained from the EPA for all asbestos waste generated from the project.
- (2) Applicable State Waste Hauler license and registration numbers.
- (3) Federal Hazardous Materials Waste Hauler number.
- (4) Designated landfill EPA Permit numbers.

- (I) Prior to loading asbestos waste the enclosed cargo areas (dumpster) shall be prepared as follows:
 - (1) Clean via HEPA-vacuum and wet wipe techniques the enclosed cargo areas of all visible debris prior to preparing with polyethylene.
 - (2) Line the cargo area with two (2) layers of 6-mil polyethylene sheeting to prevent contamination from damaged or leaking containers. Floor sheeting shall be installed first and extend up the walls a minimum of 24-inches. Wall sheeting shall be overlapped and taped securely into place.
- (J) Asbestos-containing waste shall be placed on level surfaces in the cargo area of the dumpster and shall be packed tightly to prevent any shifting or tipping of the waste during transportation.
- (K) Asbestos-containing waste shall not be thrown into or dropped from the dumpster. All material shall be handled carefully to prevent rupture of the containers.
- (L) All personnel engaged in handling and loading of contaminated waste outside of the work area shall wear protective clothing. The disposable clothing shall include head, body and foot protection and color of clothing shall be different from abatement personnel in the work area. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters.
- (M) The Contractor shall immediately clean debris or residue observed on containers or surfaces outside of the work area. Cleaning shall be via HEPA equipped wet/dry vacuums only.
- (N) All asbestos-containing waste shall be transported from the abatement site to the landfill by a registered Waste Hauler. When transporting ACW:
 - (1) Ensure that the ACW has been sufficiently wetted down in a leak tight container.
 - (2) Rewet and repackage any damaged containers.
 - (3) Maintain at storage site an adequate supply of spare leak tight containers.
 - (4) Maintain at storage site an adequate supply of amended water.
 - (5) Keep ACW separate from any other waste.
- (O) Keep ACW in a secured, enclosed, and locked container.
- (P) Waste transport documents shall conform to the requirements of the U.S. Department of Transportation, Hazardous Materials Transportation Regulation, 49 CFR Part 173 and EPA 40 CFR 61.150 (d)(1)(2). Shipping documents shall be clearly marked with the required designation "RQ Asbestos". The Contractor shall provide a copy of this document to the City.
- (Q) A uniform hazardous waste manifest shall be prepared by the Contractor and signed by the Contractor each time the Contractor ships a dumpster load of Asbestos-Containing Waste Material. The uniform hazardous waste manifest shall include the site of waste generation, the names and addresses of the Transporter, the Contractor, and the landfill operator with information on the type and number of asbestos-waste containers, time and date. The Contractor shall provide the Engineer, Testing Laboratory or authorized designated representative with signed copies of the waste manifest before each departure.
- (R) The Contractor or the Contractor's registered hazardous Waste Hauler shall transport asbestos-containing waste material from the abatement site directly to the specified disposal site. The Contractor or Waste Hauler shall not accept material from any other site when transporting asbestos-containing waste material from the abatement site. The authorized DDC representative or Engineer reserves the right to travel with Contractor's Waste Hauler to the waste disposal site. No intermediate storage of waste material (i.e. Contractors warehouse) shall be permitted.

- (S) Final or progress application for payments will not be processed unless all hazardous waste manifests generated to date have been received and reviewed by the Engineer.
- (T) All asbestos materials, wastes, shower water, polyethylene disposable equipment and supplies shall be disposed of as contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York State Department of Environmental Conservation and the New York Department of Sanitation.
- (U) The Contractor shall transport all sealed drums to a landfill disposal site approved by the Department of Environmental Conservation and the EPA. Transportation shall be performed by a New York State registered Waste Hauler, where required. When presenting the ACW for disposal the Contractor or subcontractor shall:
 - (1) Ensure that waste container is properly labeled according to the National Emission Standard for Hazardous Air Pollutants (NESHAP); Asbestos Revision, 40 CFR, Part 61, Subpart M. The labels shall include the name of the waste generator and the location where the waste was generated.
 - (2) Comply with all applicable orders issued pursuant to asbestos disposal.
 - (3) Ensure that ACW has been sufficiently wetted down.
 - (4) Rewet and repackage any damaged containers.
 - (5) Keep ACW separate from all other wastes.
- (V) The Contractor shall notify the waste disposal site, at least 24-hours prior to transportation of contaminated waste to be delivered. The Contractor shall determine if a larger notification period is required.
- (W) At the site, the Contractor or Waste Hauler trucks shall approach the dump location as close as possible for unloading asbestos waste. Containers shall be carefully placed in the ground. Do not throw containers from truck.
- (X) The Contractor or Waste Hauler shall inspect containers as they are unloaded at the disposal site. Material in damaged containers shall be repacked in empty containers, as necessary.
- (Y) The Contractor or Waste Hauler shall not remove asbestos-containing waste material from drums unless required to do so by the disposal site City. Used drums shall be disposed of as asbestos-contaminated waste.
- (Z) All personnel engaged in unloading of the containers at the waste site shall wear protective clothing. The disposable clothing shall include head, body and foot protection. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters. Workers shall remove their protective clothing at the disposal site, place it in labeled disposal bags and leave them with the deposited waste shipment.
- (AA) For the compaction operation, the Contractor shall ensure that disposal sites personnel have been provided with personal protective equipment by the disposal operator. If the disposal site City has not provided this protective equipment, the Contractor shall supply protective clothing and respiratory protection for the duration of this operation (PAPR respirators are mandatory).
- (BB) If containers are broken or damaged, the Contractor or Waste Hauler shall, using personnel who are properly trained and wearing proper protective equipment, shall repackage the waste in properly labeled containers. The Contractor shall then clean the entire truck and its contents using HEPA-vacuums and wet cleaning techniques until no visible residue is observed.

- (CC) Following the removal of all containerized waste, the Contractor shall decontaminate the truck cargo area using HEPA-vacuums and/or wet cleaning techniques until no residue is observed. All 6-mil polyethylene sheeting shall be removed and discarded as asbestos-containing waste material along with contaminated cleaning material and protective clothing, in containers at the disposal site.
- (DD) The transporter(s) of all asbestos waste shall not back-haul any items on returning from landfill/disposal site.
- (EE) All asbestos waste shall be disposed of in an approved Asbestos Landfill site only.
- (1) NO PERSON UNDER ANY CIRCUMSTANCES SHALL ABANDON A.C.W. The same shall be disposed of only by certified persons in approved landfills.
 - (2) A manifest form will be signed by the Landfill documenting receipt and acceptance of the asbestos-containing waste. This manifest will be furnished to the City of New York.
 - (3) It is the responsibility of the Asbestos Contractor to determine current waste handling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Asbestos Contractor must comply fully with these regulations and all appropriate U.S. Department of Transportation, EPA and other Federal, State and Local entities' regulations and all other current legal requirements.
 - (4) The Asbestos Contractor shall obtain an agreement from the transporter(s) that the practice of "Back-Hauling" will not be engaged in, with respect to any and all waste loads taken from this site during the work.
 - (5) The Asbestos Contractor will document actual disposal of the waste at the designated landfill by having completed a Disposal Certificate and will provide a copy of the same to the Department of Design and Construction.

67.11.6 ACCEPTANCE

67.11.6.1 ACCEPTANCE

- (A) Upon satisfactory completion of all decontamination procedures, a certificate will be issued by the Engineer with copies to all parties.
- (B) A Letter Of Compliance stating that all the work on the project was performed in accordance with the specifications and all applicable Federal, State and Local regulations.
- (C) All warranties as stated in the specifications.

67.11.7 MEASUREMENT AND PAYMENT

67.11.7.1 MEASUREMENT

The quantity of "INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE" to be measured for payment shall be the actual number of linear feet of each size steel water main pipe and fittings with asbestos containing coal tar wrap removed in compliance with the requirements of this section. Measurement shall be made in linear feet along the axis of the pipes. The removal lengths of valves, fittings and other pipe connections that are attached to the steel pipe water main and required to be removed as part of the removal operation of the existing steel pipe water main shall be included for purpose of this calculation.

No additional measurement for payment will be made for the removal of any coal tar wrap asbestos containing material from the existing steel pipe which is designated to remain in place, but is required to facilitate the cutting of the existing pipe and joining it to the new pipe to the existing steel pipe. The cost shall be deemed to be included in the unit price bid for this item.

67.11.7.2 PAYMENT

The contract price for "INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE" shall be the unit price bid per each size existing steel pipe water main's incremental cost difference for all labor, material, equipment, insurance, and incidentals required to complete all work under other scheduled contract items, using the methods required under this section to remove and dispose of coal tar wrap asbestos containing materials associated with water main replacement.

This item will be paid only in conjunction with other scheduled contract items for installing the new steel water main pipe (e.g. Payment would be made under the unit price bid for Item No. 60.21SP6T72 - FURNISHING, DELIVERING AND LAYING 72-INCH STRAIGHT STEEL PIPE, 3/4-INCH WALL THICKNESS, for the length of pipe installed plus payment would be made under the unit price bid for Item No. 67.11AA72 - INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING 72-INCH DIAMETER STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE, in order to remove and dispose of the existing asbestos contaminated coal tar wrapped pipe). However, payment will be made under this item only for the initial length of pipe and appurtenances removed at a particular location.

Payment for Incremental Cost For Asbestos Abatement Work Performed On Existing Steel Pipe Water Main To Be Removed, Complete will be made under the Item Number as calculated below:

The Item Numbers for Incremental Cost For Asbestos Abatement Work Performed On Existing Steel Pipe Water Main To Be Removed, Complete have nine characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Incremental Cost For Asbestos Abatement Work Performed On Existing Steel Pipe Water Main To Be Removed, Complete:

67.11

(2) The sixth and seventh characters shall define Incremental Cost For Asbestos Abatement Work Performed On Existing Steel Pipe Water Main To Be Removed, Complete:

AA - Incremental Cost For Asbestos Abatement Work
Performed On Existing Steel Pipe Water Main To Be
Removed, Complete

(3) The eighth and ninth characters shall define the Diameter of the Existing Steel Pipe Water Main. (The eighth and ninth characters representing the unit of inches for the Diameter of the Existing Steel Pipe Water Main.) See examples below:

36 - 36"
72 - 72"

(4) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
67.11AA36	INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING 36-INCH DIAMETER STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE	L.F.
67.11AA72	INCREMENTAL COST FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING 72-INCH DIAMETER STEEL PIPE WATER MAIN TO BE REMOVED, COMPLETE	L.F.

APPENDIX
NYCDEP ATTACHMENTS

NYC DEP Asbestos Control Program

VAR # _____

ATTACHMENT TM
REQUIREMENTS FOR MODIFIED TENT PROCEDURES (FOR GROSS ABATEMENT)
APPLIES TO VARIANCES FROM TITLE 15, CHAPTER 1, RULES OF THE CITY OF NEW YORK,
SECTIONS 1-81(m) AND 1-91(c) {15 RCNY § 1-81(m) AND § 1-91(c)}

1. All tent enclosures and contiguous spaces within a radius of 10 feet shall be roped off and regulated to allow only certified workers and authorized visitors to enter.
2. 15 RCNY § 1-106 shall be complied with except that
 - I. all tents shall be lined with 2 layers of plastic sheeting (6-mil thickness at a minimum);
 - ii. the amounts of ACM that may be abated in each modified tent shall **NOT EXCEED** (a) 160 square feet and/or (b) 260 linear feet.
 - iii. the total amount of ACM that may be abated at any one time in several modified tents shall **NOT EXCEED** 1,000 combined square feet plus linear feet.
3. All modified tents shall be fully framed (including horizontally across the top, if applicable) with 2x3 (minimum) wood or metal studs spaced not more than 36 inch center-to-center vertically around all sides (except at the entry/exit which shall not exceed 36 inch width); and
4. A minimum of one air volume change per 15 minutes through each modified tent shall be maintained.
5. An airlock having at least 3 feet length between the two curtained doorways shall be constructed at the entrance to each and every tent if the decontamination unit is not attached to the tents, and
6. If a decontamination unit is not attached to each tent, located within each airlock there shall be extra clean and uncontaminated disposable protective suits (e.g. Tyveks), and one such clean suit shall be worn by each worker in the airlock, immediately after removal of the outer suit as per 15 RCNY § 1-106(k), before each worker exits any airlock.
7. Any decontamination unit that is not attached to a tent (i.e. that is remote from a tent) shall be constructed in compliance with the requirements of Attachment D and must be located on the same floor as the modified tents.
8. Decontamination units that are attached to tents shall comprise at least a shower room and a clean room, with one curtained doorway separating them, and with a second curtained doorway separating the tent from the shower room.
9. After the ACM removal and bagging [refer 15 RCNY § 1-106(f) and (g)], the bagged waste shall be HEPA-vacuumed then wet cleaned and transferred into the airlock or into the shower room (as per Items 5 and 8 above respectively) for double bagging, and thereafter the double-bagged waste shall be transferred outside the airlock or outside the clean room for its final transfer to storage in a holding area and/or to legal means of disposal.
10. If the integrity of the tent is compromised and/or visible emissions are detected outside the tent and/or levels exceed 0.01 f/cc work shall stop and 15 RCNY § 1-45(a) shall be complied with immediately. Post-abatement clearance air samples shall be required in the areas outside the tent.
11. A minimum of 3 during area air samples and 3 post abatement clearance air samples must be taken in compliance with section 1-41 of the NYC DEP Asbestos Regulation for each modified tent.

NOTE: This attachment may be revised at any time by the Department.

TRU/JM 04/2005

NYC DEP ASBESTOS CONTROL PROGRAM

VAR# _____

ATTACHMENT D
REMOTE WORKER DECONTAMINATION UNITAPPLIES TO VARIANCE FROM TITLE 15, CHAPTER 1, RULES OF THE CITY OF
NEW YORK SECTIONS 1-82(a) AND 1-83(a)* {15 RCNY § 1-82(a) AND § 1-83(a)*}.

1. The remote worker decontamination unit shall be constructed outside the work area, in accordance with 15 RCNY § 1-82, and attached to individual glovebag work areas (or tents) or common space leading to individual work areas.
2. The remote worker decontamination unit shall consist of, at least, a shower room, and a clean room separated from each other by an airlock and from the glovebag work area.
3. In addition to the shower heads, the shower room shall be provided with a flexible hose for equipment and waste decontamination.
4. The remote holding area for the asbestos containing waste shall comply with Title 16, Chapter 8, Rules of the City of New York (16RCNY 8 ET SEQ.)
5. The decontamination unit shall be maintained in accordance with 15 RCNY § 1-94 (except sub-section b).
6. All asbestos handlers shall wear two disposable suits, including gloves, hood and footwear, and appropriate respiratory equipment, after removing street clothes in the clean room, and must exit from the shower room.
7. Each worker, before leaving the glovebag work area (or tent), shall clean the outside of the respirators and outer protecting clothing by wet cleaning and/or HEPA vacuuming. The outer disposable suit shall be removed in the work area and the workers shall then proceed to the shower room. The inner disposable suit and respirator shall be washed thoroughly before removing and prior to aggressive shower.
8. After the ACM removal and bagging {refer 15 RCNY § 1-105(c)15}, the bagged waste shall be HEPA-vacuumed and then transferred to the shower room for wet cleaning and double bagging, prior to storage and disposal.
9. Worker and waste decontamination cannot take place at the same time and decontamination system shall be in place for the entire duration of the abatement activities.
10. The following additional conditions must be complied with in order to re-use an attached decontamination enclosure system(s) as a remote decontamination unit.
 - i) Final air clearance must be achieved in the full containment area to which the decontamination enclosure system(s) is attached.
 - ii) The decontamination enclosure system(s) shall be re-plasticized in accordance with 15 RCNY § 1-82.

*Required for projects disturbing 1,000 or more linear feet.

NOTE: This attachment may be revised at any time by the Department.

TRU/JM 4/2005

ATTACHMENT
ASBESTOS CONTAINING COAL TAR WRAP AND PIPE REMOVAL PROCEDURE

The work procedure to be utilized for the removal of asbestos and the water main pipe shall be as follows:

I. Personal Protective Equipment

Prior to beginning work, all workers performing the removal of the coal tar wrap must equip themselves with the proper personal protective equipment (PPE). The PPE required for the removal of coal tar wrap includes:

- (1) Tyvek suit with boot protection ("booties").
- (2) Disposable gloves (latex or nitrile).
- (3) Eye protection.
- (4) Half face respirator with HEPA cartridges.

In addition to the PPE listed above, the tools and materials which will be required for this operation shall include the following:

- (1) Amended water solution.
- (2) 6-mil plastic sheeting.
- (3) 6-mil plastic asbestos disposal bags.
- (4) Disposable rags or wipes.
- (5) Duct tape.
- (6) Hand tools (chipping hammer, chisel, scraper, putty knife).
- (7) Abrasive pads.
- (8) Asbestos barrier tape.

NOTE: No power tools, grinders, sanders, or burning apparatus can be used to remove coal tar wrap.

II. Work Procedure

(A) Removal:

The following work procedure shall be employed when removing coal tar wrap:

- (1) Set up the asbestos barrier tape around the perimeter of the excavation.
- (2) Place 6-mil plastic sheeting under the steel water main pipe to collect loose debris.
- (3) Wet down coal tar wrap with amended water.
- (4) Use hand tools to break away the large chunks of coal tar wrap. Place the removed wrap in a plastic asbestos disposal bag.
- (5) Remove only the amount of wrap around the circumference of the pipe (two (2) foot wide strip) necessary to cut the pipe for future removal.
- (6) Ensure that the intact coal tar wrap on the pipe is not damaged when removing the pipe from the excavation.
- (7) For sections of pipe left in the ground, seal all ends of exposed wrap with duct tape. Plastic wrap and duct tape all coated pipes that will be removed from the site.
- (8) In the event that some wrapping material did not fall onto the plastic sheeting, collect these pieces and place them on the sheeting.
- (9) Once coal tar wrap removal is completed and the exposed ends are sealed, fold the plastic sheeting onto itself and place it in a properly labeled asbestos bag.
- (10) Wet wipe all equipment with amended water and rags before removal from work area. Place used rags and old work gloves in asbestos disposal bags.
- (11) Ensure that bagged ACM is wet prior to transportation.
- (12) Cut the pipe at the abated locations using mechanical, cold cutting methods.
- (13) Double wrap large sections of cut pipe with intact ACM with two (2) layers of six (6) mil plastic sheeting, sealed with tape in ten (10) foot sections.

- (14) Wrapped sections of pipe with intact ACM shall be properly labeled in accordance with OSHA Regulations 29 CFR 1926 58K(2), and shall be kept wet until disposal in compliance with Title 15, Chapter 1, Rules of the City of New York (15RCNY 1).

(B) Disposal:

The following work procedure shall be employed when disposing coal tar wrap:

- (1) Double bag all waste materials. The inside and outside bags must have an asbestos label with the work location identified.
- (2) Complete an asbestos waste tracking form and attach it to the bag.
- (3) Place double bagged waste in a truck and transport it to an approved New York State asbestos landfill.
- (4) All ACM waste bags must be picked up and disposed of on a daily basis at the end of each shift.

END OF ADDENDUM No. 4
This Addendum Consists of Forty Five (45) Pages.

NO TEXT ON THIS PAGE

ATTACH TO CONTRACT DOCUMENTS

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

PROJECT ID: HWPLLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

Together With All Work Incidental Thereto

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

ADDENDUM NO. 5

DATED: August 15, 2012

**Specifications For
Abatement of Transit Authority Duct Insulation Asbestos Containing Materials
ASSOCIATED WITH INSTALLATION OF TRUNK WATER MAINS
IN PARK AVENUE SOUTH, ETC.
BOROUGH OF MANHATTAN**



**NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION**

Prepared By:

**Bureau of Environmental and Geotechnical Services
30-30 Thomson Avenue, 5th Floor
Long Island City, New York 11101**

**Revision #: 00 or Final Submission
Date: July 15, 2011**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and hereby made part of said Contract Documents to the same extent as if it was originally included herein.

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SECTION 79.11

ALLOWANCE FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING TRANSIT AUTHORITY DUCT INSULATION (REMOVAL OF ASBESTOS-CONTAINING MATERIALS, REPLACEMENT WITH NON-ASBESTOS-CONTAINING MATERIALS, AND SUPPORT AND PROTECTION OF EXISTING TRANSIT AUTHORITY DUCT, COMPLETE)**79.11.1 GENERAL****79.11.1.1 DESCRIPTION**

- (A) The contract documents are as defined in the "Standard Construction Contract". The General Construction Provisions of the Standard Water Main Specifications shall apply to all work of this section.
- (B) Work specified herein shall be as follows:
- (1) The removal and disposal of Asbestos-Containing Materials (ACM) and asbestos-contaminated duct insulation from existing Transit Authority duct that are exposed due to other contract work.
 - (2) The replacement of the removed ACM insulation with a Transit Authority approved non-asbestos-containing materials insulation.
 - (3) The support and protection of the existing Transit Authority duct that are exposed and to remain in service at all times.
- (C) The phasing and scheduling of work for this project shall be coordinated with and approved by the Engineer. The Engineer will make the final determination on all issues under this contract covered by this specification in coordination with NYC Department of Design and Construction's Bureau of Environmental and Geotechnical Services (BEGS).

79.11.1.2 SCOPE OF WORK

- (A) The Contractor is to provide all labor, materials, equipment, services, testing, appurtenances, permits and agreements necessary to perform the work required for the removal and disposal of ACM and asbestos-contaminated duct insulation from existing Transit Authority duct that are exposed, the replacement of the removed ACM insulation with a Transit Authority approved non-asbestos containing materials insulation, and the support and protection of the existing Transit Authority duct that are exposed and to remain in service at all times as required by these contract documents.

All work shall be performed in accordance with this specification, EPA regulations, OSHA regulations, New York City Local Law 70, Title 15, Chapter 1 RCNY, New York State Industrial Code 56, NIOSH recommendations, and any other applicable federal, state or local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions are applicable.

The work to be performed in order to replace the removed ACM insulation with a Transit Authority approved non-asbestos containing materials insulation, and to support and protection the existing Transit Authority duct that are exposed and to remain in service at all times shall be done in accordance with Transit Authority specifications, standards and requirements.

- (B) The intent of this section is to ensure that the Contractor is responsible for the following:
- (1) Abatement of all exposed ACM.
 - (2) Cleaning and decontamination of the entire affected area.
 - (3) Removal of sections of ACM duct insulation, as necessary. The Contractor shall dispose of all debris associated with such removal activities as ACM waste.
 - (4) Removal and disposal of all exposed ACM found within these areas such as soil within excavated area, and duct insulation, etc.

- (5) Replacement of the removed ACM insulation with a Transit Authority approved non-asbestos-containing materials insulation.
 - (6) Support and protection of the existing Transit Authority duct that are exposed and to remain in service at all times.
 - (7) Provide all scaffolding, platform installation, equipment, tools, transportation and any other equipment required and/or necessary to complete all work described in the contract documents.
 - (8) The Contractor shall be responsible for acquiring all permits required to perform this work, and paying any and all fees or changes imposed by Local, State or Federal Law, Rule or Regulation applicable to the work specified herein.
- (C) The extent of the work areas requiring this work shall be as ordered by the Engineer. The Contractor shall perform the following work as described below:

WORK AREA EXCAVATION:

- (1) Remove and dispose of asbestos-containing duct insulation within the work area. Asbestos-containing duct insulation shall be removed utilizing the approved NYCDEP procedure outlined below. Variance for utilizing this procedure within the work area shall be applied for by the Contractor and approved by the New York City Department of Environmental Protection (NYCDEP) prior to the start of abatement activities. In areas where duct insulation is to be removed, the Contractor shall be responsible to remove all duct insulation material within the soil below the area where the duct insulation has to be removed. All duct insulation and associated materials as well as impacted soil shall be disposed of as contaminated waste.
 - (2) Replacement of the removed ACM insulation with a Transit Authority approved non-asbestos-containing materials insulation, including all inspection, testing, etc. required.
 - (3) Support and protection of the existing Transit authority duct that are exposed and to remain in service at all times, including the design and submittal of all support and protection drawings required for approval by all appropriate agencies.
- (D) The Contractor's attention is directed to the fact that patents cover certain methods of asbestos abatement indicated in the specifications. To date, patents have been issued with regard to negative pressure enclosures or negative or reduced pressure and glove-bag.
- (E) The Contractor shall be solely responsible for and shall hold the City of New York Department of Design and Construction and the City harmless from any and all damages, losses and expenses resulting from any infringement by Contractor of any patent including, but not limited to, the patents described above, used by Contractor during performance of this agreement.
- (F) Prior to starting abatement work, the Contractor must notify the Commissioner of the City of New York Department of Design and Construction if the Contractor anticipates any difficulty in performing the work as directed and required by these specifications. The Contractor shall be required to attend an on-site job meeting with the Engineer prior to start of abatement work to examine conditions of the site for removal and plan the sequence for removal operations.
- (G) The Contractor is responsible for amending the Asbestos Inspection Report (ACP-7) and resubmitting it to the NYCDEP Asbestos Control Program prior to abatement work as per Title 15, Chapter 1 of RCNY for any changes in quantities and/or starting date.
- (H) If more than one (1) year has elapsed since the original ACP-7 was submitted to the Department of Environmental Protection, the Contractor is responsible for preparing and submitting a new ACP-7 to

the Department of Environmental Protection as well as providing all other notifications to various regulatory agencies as required.

- (I) In addition, the Contractor is also responsible for preparing, amending and submitting any Asbestos Variance Applications (ACP-9) that may be required for the completion of the contract or incidental work.
- (J) The Contractor is also responsible for preparing and submitting all filings, notifications, etc. required by all City, State and Federal regulatory agencies having jurisdiction.
- (K) For coordination with other contractors, see the General Provisions governing all contracts.
- (L) Related Asbestos Removal Work Under Other Contracts:
 - (1) Each contractor shall be responsible for the removal of incidental asbestos not identified in this section and found prior to or during the work.
 - (2) Incidental asbestos is defined as ACM that is discovered during the course of their work that must be abated to enable contractors to perform the work of their contract.

(M) Work Hours:

- (1) The Contractor shall establish the Contractor's work schedule in a way that avoids interference or conflict with the normal activities of the area.
- (2) All work shall be done during regular working hours unless the Contractor requests authorization to work in other than regular working hours and such authorization is granted by the Commissioner. (Regular working hours are those during which any given facility in which work is to be done is customarily open and functioning).
- (3) The order of phases and start dates associated with each will be determined by the Engineer.
- (4) Waste transfer must be approved by the Engineer.

(N) Stages Of Asbestos Removal Work:

The Abatement Contractor or Subcontractor will be required to perform the work and it is the intent of this specification to remove all asbestos-containing and asbestos contaminated materials from the work area impeding and/or impacting the installation of any portion of the trunk water main connection. The Contractor shall inform the Engineer prior to start of this work in order that the Engineer can verify all work and quantities. No payment for this work will be made unless verified by the Engineer in writing.

- (O) Certain equipment in the work area may need to remain operational during removal. Therefore, the removal of ACM from this equipment shall be performed as the last removal activities within the work area. The Contractor shall coordinate the scheduling for the removal of ACM on functioning equipment with the Engineer.

79.11.1.3 SPECIAL EXPERIENCE REQUIREMENTS FOR ASBESTOS ABATEMENT

- (A) General: The special experience requirements set forth in Paragraph (B) below apply to the contractor who will be performing the Asbestos Abatement work under this contract. 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 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.

- (1) Evaluation: Compliance with the special experience requirements for Asbestos Abatement must be submitted for evaluation a minimum of thirty (30) days prior to commencement of that phase of work which may require removal of asbestos-containing duct insulation. The Contractor is advised that the Contractor will not be permitted to commence excavation work at the site for that phase of construction which may require possible removal of asbestos-containing duct insulation, should the Contractor's Asbestos Abatement contractor fail to comply with the special experience requirements. Compliance with the experience requirements set forth herein will be determined solely by the City.
 - (2) Compliance By The Asbestos Abatement Contractor As An Entity: Compliance with the special experience requirements must be demonstrated by the Asbestos Abatement contractor. The Asbestos Abatement contractor itself must have been in existence as the same entity for the three (3) year period prior to the bid opening. During such period, the entity itself must have achieved compliance with the special experience requirements. The Asbestos Abatement contractor entity may not use or rely on the experience or credentials of any other entity regardless of any relationship such other entity may have to the Asbestos Abatement contractor.
- (B) Requirements: The Asbestos Abatement contractor must demonstrate compliance with the special experience requirements set forth in subparagraphs (1) through (5) below. The Asbestos Abatement contractor must submit documentation demonstrating compliance with all listed requirements. Such documentation shall include without limitation, all required licenses, certificates, and documentation.
- (1) The Asbestos Abatement contractor must, whether an individual, corporation, partnership, joint venture or other legal entity, demonstrate for the three (3) year period prior to the bid opening, that it has been licensed by the New York State Department of Labor, as an "Asbestos Contractor".
 - (2) The Asbestos Abatement contractor must, for the three (3) year period prior to the bid opening, have been in the business of providing asbestos abatement services as a routine part of its daily operations. In addition, the Asbestos Abatement contractor must have on staff a certified Project Designer for the purpose of submitting regulatory filings with the NYSDOL and/or NYCDEP involving variances.
 - (3) The Asbestos Abatement contractor proposing to do asbestos abatement work must be thoroughly experienced in such work and must provide evidence of having successfully performed and completed in a timely fashion at least five (5) asbestos abatement projects of similar size and complexity. The aggregate cost of these projects must be at least \$1,000,000 in each of the three (3) years.
 - (4) For each project submitted to meet the experience requirements set forth above, the Asbestos Abatement contractor must submit the following information for the project: name and location of the project; name title and telephone number of the owner or the owner's representative who is familiar with the Asbestos Abatement contractor's work; brief description of the work completed as a prime or sub-contractor; amount of contract or subcontract; and, the date of completion.
 - (5) The Asbestos Abatement contractor must demonstrate that it has the financial resources, supervisory personnel and equipment necessary to carry out the work and to comply with the required performance schedule, taking into consideration other business commitments. The Asbestos Abatement contractor must submit such documentation as may be required by the Department of Design and Construction to demonstrate that it has the requisite capacity to perform the required services of this contract.
- (C) Throughout the specifications, reference is made to codes and standards which establish qualities and types of workmanship and materials, methods for testing and reporting on the pertinent characteristics thereof to provide materials or workmanship that meet or exceed the specifically named codes or standards where required by these specifications.

- (D) Site Investigation: The Contractor shall inspect all the specifications and related drawings, and will investigate and confirm the site conditions affecting the work, including, but not limited to:
- (1) Physical considerations and conditions of both the material and structure. These considerations include any obstacles or obstructions encountered in accessing or removing the material.
 - (2) Handling, storage, transportation and disposal of the material.
 - (3) Availability of qualified and skilled labor.
 - (4) Availability of utilities.
 - (5) Exact quantities of all materials to be disturbed and/or removed.

79.11.1.4 WORK BY OTHERS

The City reserves the right during the term of this contract to have work performed on asbestos abatement projects by other contractors as the situation warrants.

79.11.1.5 DEFINITIONS

- (A) General Explanation: Certain terms used in this specification are defined below. Definitions and explanations of this specification are not necessarily complete or exclusive, but are general for the work to the extent they are not stated more explicitly in another element of the contract documents.
- (B) Definitions In General Use:
- (1) Approve: Where used in conjunction with Engineer's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be held to limitations of Engineer's responsibilities and duties as specified in contract documents. In no case will "approval" by Engineer be interpreted as a release of Contractor from responsibilities to fulfill requirements of contract documents.
 - (2) Directed, Requested, Etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by Engineer," "requested by Engineer," and similar phrases. However, no such implied meaning will be interpreted to extend Engineer's responsibility into Contractor's responsibility for construction supervision.
 - (3) Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
 - (4) Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.
 - (5) Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.
 - (6) Installer: The term "installer" is defined as the entity (person or firm) engaged by Contractor, or its subcontractor or sub-subcontractor for performance of a particular unit of work at project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (installers) be expert in operations they are engaged to perform.

- (7) Provide: Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
- (8) Testing Laboratory: The term "Testing Laboratory" is defined as an entity engaged by the City to perform specific inspections or tests of the work, either at project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.

(C) Definitions Relative To Asbestos Abatement:

- (1) Abatement: Procedures physically taken to control fiber release from ACM. This includes removal, encapsulation, enclosure, and repair.
- (2) Aggressive Sampling: Method of sampling in which the individual collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.
- (3) AIHA: American Industrial Hygiene Association.
- (4) Airlock: System for permitting entrance and exit while restricting air movement between a contaminated area and an uncontaminated area. It consists of two (2) curtained doorways separated by a distance of at least three (3) feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.
- (5) Air Sampling: Process of measuring the fiber content of a known volume of air collected during a specific period. The procedure utilized for asbestos follows the NIOSH Standard Analytical Method 7400, or the provisional transmission electron microscopy methods developed by the US EPA which is utilized for lower detection levels and specific fiber identification.
- (6) Amended Water: Water to which a surfactant has been added.
- (7) ANSI: American National Standards Institute.
- (8) Area Air Sampling: Any form of air sampling or monitoring where the sampling device is placed at some stationary location.
- (9) Asbestos: Any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.
- (10) Asbestos-Containing Material (ACM): Asbestos or any material containing more than one percent (1%) asbestos.
- (11) Asbestos-Containing Waste Material: ACM or asbestos-contaminated objects requiring disposal.
- (12) Asbestos Handler: Individual who disturbs, removes, repairs, or encloses friable asbestos material. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.
- (13) Asbestos Handler Supervisor: Individual who supervises the handlers during an asbestos project and ensures that proper asbestos abatement procedures as well as individual safety procedures are being adhered to. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.
- (14) Asbestos Handling Certificate: Certificate(s) issued to individuals who have met the criteria established by NYCDEP and/or NYSDOL.

- (15) Asbestos Inspection Report: A report on the condition of a building or structure in relation to the presence and condition of asbestos therein.
- (16) Asbestos Investigator: An individual certified by NYCDEP as having successfully demonstrated the ability to identify the presence of and evaluate the condition of asbestos in a building or structure.
- (17) Asbestos Project: Any form of work performed in connection with the alteration, innovation, modification, or demolition of a building or structure which will disturb (e.g. remove, enclose, encapsulate) more than three (3) linear feet or more than three (3) square feet of friable ACM.
- (18) ASTM: The American Society for Testing and Materials International.
- (19) Authorized Visitor: Authorized visitor shall mean the Commissioner and the Commissioner's representative, and any representative of a regulatory or other agency having jurisdiction over the project.
- (20) Certified Industrial Hygienist (CIH): Individual with a minimum of five (5) years experience as an industrial hygienist and who has successfully completed both levels of the examination administered by the American Board of Industrial Hygiene and who is currently certified by that board.
- (21) Certified Safety Professional (CSP): Individual having a bachelor's degree from an accredited college or university and a minimum of four (4) years experience as a safety professional and who has successfully completed both levels of the examination administered by the Board of Certified Safety Professionals and who is currently certified by that board.
- (22) City: Shall mean the City of New York.
- (23) Clean Room: An uncontaminated area or room that is part of worker decontamination enclosure system with provisions for storage of workers' street clothes and protective equipment.
- (24) Clearance Air Monitoring: Employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers and shall be performed as the final abatement activity.
- (25) Commissioner: Shall mean the head of the Agency that has entered into this contract or a duly authorized representative.
- (26) Competent Person: Shall mean the designated person as defined in OSHA 29CFR 1926.1101.
- (27) Curtained Doorway: Device that consists of at least three (3) overlapping sheets of polyethylene over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and left side. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.
- (28) Decontamination Enclosure System: Series of connected rooms, separated from the work area and from each other by air locks, for the decontamination of workers, materials, waste containers, and equipment.
- (29) Encapsulant (Sealant) or Encapsulating Agent: Liquid material which can be applied to ACM and which temporarily controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). This may also be used to seal surfaces from which ACM has been removed.
- (30) Encapsulation: Coating or spraying of ACM with a sealant.

- (31) Enclosure: Construction of airtight walls and/or ceilings between ACM and the facility environment, or around surfaces coated with ACM, or any other appropriate procedure as determined by the NYCDEP which prevents the release of asbestos fibers.
- (32) ELAP: Environmental Laboratory Approval Program administered by the New York State Department of Health.
- (33) EPA or USEPA: United States Environmental Protection Agency.
- (34) Equipment Room: Contaminated area or room that is part of the worker decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.
- (35) Fixed Object: Utility or associated piping within the work area that cannot be removed from the work area.
- (36) Friable Asbestos Material: Asbestos or any ACM that can be crumbled, pulverized, or reduced to powder when dry, by hand or other mechanical pressure.
- (37) Glove-Bag Technique: Method for removing friable ACM from heating, ventilation, and air conditioning (HVAC) ducts, short piping runs, valves, joints, elbows, and other nonplanar surfaces in a noncontained work area. The glove-bag assembly is a manufactured device consisting of a glove-bag (constructed of at least 6-mil transparent polyethylene), two inward-projecting long sleeve gloves, one inward-projecting water wand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glove-bag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all asbestos fibers released during the removal process.
- (38) HEPA-Filter: High efficiency particulate air filter capable of trapping and retaining 99.97-percent of particles (asbestos fibers) greater than 0.3-micrometers mass median aerodynamic equivalent diameter.
- (39) Holding Area: Chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area.
- (40) Homogeneous Work Area: Portion of the work area that contains one type of ACM and/or where one type of abatement is used.
- (41) Industrial Hygiene: Science and art devoted to the recognition, evaluation, and control of those environmental factors or stresses, arising in or from the work place, which may cause sickness, impaired health and well being, or significant discomfort and inefficiency among worker or among the citizens of the community.
- (42) Industrial Hygienist: Individual having a college or university degree or degrees in Engineering, Chemistry, Physics or Medicine, or related Biological Sciences who, by virtue of special studies and training, has acquired competence in industrial hygiene. Such special studies and training must have been sufficient in all of the above cognate sciences to provide the abilities:
- (a) To recognize the environmental factors and to understand their effect on people and their well being; and,
 - (b) To evaluate, on the basis of experience and with the aid of quantitative measurement techniques, the magnitude of these stresses in terms of ability to impair people's health and well being; and,
 - (c) To prescribe methods to eliminate, control, or reduce such stresses when necessary to alleviate their efforts.

- (43) Large Asbestos Project: Asbestos project involving the disturbances (e.g. removal, enclosure, encapsulation) of 260-linear feet or more of friable ACM or 160-square feet or more of friable ACM.
- (44) Major Violation: Any action, on the job performance or lack of performance that may place any individual at risk other than the worker who commits the violation. A major violation is equivalent to two (2) violation points.
- (45) Minor Asbestos Project: Project involving the disturbance (e.g. removal, enclosure, encapsulation, repair) of more than three (3) linear feet, but not more than twenty-five (25) linear feet of friable ACM or more than three (3) square feet, but not more than ten (10) square feet of friable ACM.
- (46) Minor Violation: Any action, on the job performance or lack of performance that may place the worker at risk. A minor violation is equivalent to one (1) violation point.
- (47) Movable Object: Any equipment or utility in the work area that can be removed from the work area.
- (48) Negative Air Pressure Equipment: Portable local exhaust system equipped with HEPA filtration. The system shall be capable of creating a negative pressure differential between the outside and inside of the work area.
- (49) NESHAPS: National Emission Standards for Hazardous Air Pollutants.
- (50) NIOSH: National Institute for Occupational Safety and Health.
- (51) NYCDEP: New York City Department of Environmental Protection.
- (52) NYSDOL: New York State Department of Labor.
- (53) Occupied Area: Area of the work site where abatement is not taking place and where personnel or occupants normally function or where workers are not required to use personal protective equipment.
- (54) OSHA: Occupational Safety and Health Administration.
- (55) Person: Individual, partnership, company, corporation, association, firm, organization, governmental agency, administration, or the NYCDEP, or any other group of individuals, or any officer or employee thereof.
- (56) Personal Air Monitoring: Method used to determine employees' exposure to airborne fibers. The sample is collected outside the respirator in the worker's breathing zone.
- (57) Personal Protective Equipment (PPE): Appropriate protective clothing, gloves, eye protection, footwear, and head gear.
- (58) Physician: Person licensed or otherwise authorized under Article 131 Section 65.22 of the New York State Education Law.
- (59) Plasticize: Cover floors and walls with polyethylene sheeting as herein specified or by using spray plastics as acceptable to the NYCDEP.
- (60) Professional Engineer (PE): Individual having, at a minimum, a Bachelor's Degree in Engineering from an accredited college or university with four (4) years acceptable experience as an engineer and who has successfully completed both levels of the Professional Engineers Examination administered by the State of New York Department of Education, Division of Professional Licensing.

- (61) **Qualitative Fit Test:** Individual test subject's responding (either voluntarily or involuntarily) to a chemical challenge outside the respirator face-piece. Three of the most popular methods include: (1) irritant smoke test; (2) odorous vapor test; and (3) taste test.
- (62) **Quantitative Fit Test:** Exposing the respiratory wearer to a test atmosphere containing an easily detectable, nontoxic aerosol, vapor or gas as the test agent. Instrumentation, which samples the test atmosphere and the air inside the face-piece of the respirator, is used to measure quantitatively the leakage into the respirator. There are a number of test atmospheres, test agents, and exercises to perform during the test.
- (63) **Registered Architect (RA):** Individual having, at a minimum, a Bachelor's Degree in Architecture from an accredited college or university with three (3) years acceptable experience as an architect and who has successfully completed both levels of the Architects Registration Examination administered by the State of New York Department of Education, Division of Professional Licensing.
- (64) **Removal:** Stripping of any asbestos-containing materials from surfaces or components of a structure or taking out structural components in accordance with 40 CFR 61 Subparts A and M.
- (65) **Shower Room:** Room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water controllable at the tap and arranged for complete showering during decontamination.
- (66) **Small Asbestos Project:** Asbestos project involving the disturbance (e.g. removal, enclosure, encapsulation) of more than 25-linear feet and less than 260-linear feet of friable ACM or more than 10-square feet and less than 160-square feet of friable ACM.
- (67) **Staging Area:** Work area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.
- (68) **Structural Member:** Load-supporting member of a facility, such as beams and load-supporting walls, or any nonload-supporting member, such as ceiling and nonload-supporting walls.
- (69) **Surfactant:** Chemical wetting agent added to water to improve penetration.
- (70) **Visible Emissions:** Emissions containing particulate material that are visually detectable without the aid of instruments.
- (71) **Washroom:** Room between the work area and the holding area in the equipment decontamination enclosure system where equipment and waste containers are wet cleaned and/or HEPA-vacuumed prior to disposal.
- (72) **Wet Cleaning:** Removal of asbestos fibers from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with amended water.
- (73) **Work Area:** Designated excavation, spaces, or areas within a trench or structure where asbestos abatement activities take(s) place.
- (74) **Worker Decontamination Enclosure System:** Portion of a decontamination enclosure system designed for controlled passage of workers and authorized visitors, consisting of a clean room, a shower room, and an equipment room separated from each other and from the work area by airlocks and curtained doorways.
- (75) **Work Site:** Area where abatement activity is being performed. May be composed of one or more work areas.

79.11.1.6 STANDARD OPERATING PROCEDURES

(A) Develop and implement a written standard procedure for abatement work to ensure maximum protection and safeguard from asbestos exposure of the workers, visitors, employees, public, and environment.

(B) TELEPHONE PAGING DEVICE:

The Contractor or the Contractor's authorized representative shall, at all times during the normal workday or during periods of overtime work under this contract, carry a digital telephone paging device ("Beeper") and cellular telephones which can be activated by a telephone number in the 212 or 646 or 718 or 917 area code. The Contractor shall supply the Department of Design and Construction with the activation number for the device and the Contractor is liable to respond back to the calls from DDC within the next one (1) hour period after the Contractor receives calls from DDC. The cost for this device and all charges accruing shall be deemed included in all scheduled items of work.

(C) The standard operating procedure shall ensure:

- (1) Tight security from unauthorized entry into the workspace.
- (2) Restriction of Contractor's personnel to the immediate work area and access/egress routes.
- (3) Donning of proper protective clothing and respiratory protection prior to entering the work area.
- (4) Safe work practices in the work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking the respiratory protection.
- (5) Proper exit practices from the work space to the outside through the showering and decontamination facilities.
- (6) Removing asbestos in ways that minimize release of fibers.
- (7) Packing, labeling, loading, transporting, and disposing of contaminated material in a way that minimize exposure and contamination.
- (8) Emergency evacuation procedures, for medical or safety situations, to minimize the potential exposure to airborne asbestos fibers for emergency personnel, and building environment.
- (9) Safety from accidents in the workspace, especially from electrical shocks, fall hazards associated with scaffolding, slippery surfaces, and entanglements in loose hoses and equipment.
- (10) Provisions for effective supervision, air monitoring and personnel monitoring for exposure during the work.
- (11) Engineering systems that minimize exposure to fibers within the workspace.

(D) Provide an Asbestos Handler Supervisor to provide continuous supervision of all work, and to be responsible for the following:

- (1) Ensure that individuals are using proper personal protective equipment and are trained in its use.
- (2) Maintain entry log records and ensure that they are recorded in accordance with the provisions of Title 15, Chapter 1 of RCNY.
- (3) Surveillance of the work areas at a minimum of twice per work shift or as required by Title 15, Chapter 1 of RCNY, to ensure that the workers personal protective equipment is not torn or ripped and that respiratory protection is worn at all times.

- (4) Ensure that sufficient personal protective equipment is stored in the clean room.
- (5) Take precautions to prevent heat stress. Precautions include, but are not limited to, selecting lightweight protective clothing, reducing the work rate, and providing adequate fluid breaks.

(E) ENGINEERING CONTROLS:

- (1) The 8-hour time weighted average airborne concentration of fibers to which any passerby may be exposed shall not exceed 0.01-fibers per cubic centimeter of air when fibers have a physical dimension longer than 5-micrometers as determined by the method prescribed in these specifications.
- (2) All large asbestos projects shall utilize negative pressure ventilation equipment.
- (3) The negative pressure ventilation equipment shall operate continuously, 24-hours a day, from the establishment of isolation barriers through successful clearance air monitoring. If such equipment shuts off, adjacent areas shall be monitored for asbestos fibers.
- (4) On loss of negative pressure or electric power to the negative pressure ventilating units, abatement shall stop immediately and shall not resume until power is restored and negative pressure ventilation equipment is operating again.
- (5) Negative pressure ventilation equipment shall be exhausted to the outside of the tent enclosure away from passer-by and/or sidewalks.
 - (a) At no time shall the negative pressure ventilation unit exhaust with 40-feet of a receptor or adversely affect the intake ports, louvers, or entrances for the adjacent buildings.
 - (b) Heavy duty ducting of equivalent, or larger, shape and dimension as that of the negative pressure ventilation exhaust port shall be used to exhaust to the structure.
 - (c) All ducting shall be sealed and braced or supported to maintain airtight joints.
- (6) Where ducting to the outside is not possible, a second negative pressure ventilation unit compatible with the primary unit's capacity shall be connected in series. The area receiving the exhaust shall have sufficient, nonrecycling exhaust capacity to the outside of the structure. Ventilation unit exhaust ducting shall not exceed twenty five (25) feet in length due to volumetric flow rates caused by friction
- (7) In the event that there is a failure of the containment system or a breach in the Isolation Barriers, all abatement work will cease and the Contractor will immediately correct the condition. Abatement work will not resume until the work area has been smoke tested by the third party laboratory and approved by the Project Monitor.

(F) LOCKDOWN ENCAPSULATION PROCEDURES:

The following procedures shall be followed to seal in nonvisible residue while conducting lockdown encapsulation on all surfaces from which ACM is removed:

- (a) Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 USEPA Contract shall be used for lockdown encapsulation.
- (b) The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon unless reviewed and approved by DEP.
- (c) Latex paint with solids content greater than 15-percent shall be considered a lockdown sealant for coating all nonmetallic surfaces.

- (d) Encapsulants shall be applied using airless spray equipment. Spraying is to occur at the lowest pressure range possible to minimize fiber release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.

79.11.1.7 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS

- (A) Erect bilingual (English-Spanish) warning signs around the excavation and at every point of potential entry from the street level which can be viewed by the public without obstruction, in accordance with OSHA 29 CFR 1926.1101 (K) (Sign Specifications) and Title 15, Chapter 1 of RCNY. The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than OSHA requirements.
- (B) Provide the required labels for all polyethylene bags and all drums utilized to transport contaminated material to the landfill in accordance with OSHA 29 CFR 1926.1101 (K)(2) and by 49 CFR Parts 171 and 172 of the Department of Transportation regulations.
- (C) Provide any other signs, labels, warnings, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. Post in a prominent and convenient place for the workers a copy of the latest applicable regulations from OSHA, EPA, NIOSH, State of New York and New York City and any additional items mandated for posting by the aforementioned regulations.
- (D) Furnish all permits, variances and notices required to perform the work.

79.11.1.8 EMERGENCY PRECAUTIONS

- (A) Establish emergency exit(s) from the work area. The clean side of all emergency exits shall be equipped with two full sets of protective clothing and respirators at all times.
- (B) Notify local medical emergency personnel, both ambulance crews and hospital emergency room staff prior to commencement of abatement operations as to the possibility of having to handle contaminated or injured workmen, and shall be advised on safe decontamination.
- (C) Prepare to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated immediately for decontamination. When an injury occurs, precautions shall be taken to reduce airborne fiber concentrations (i.e. misting of the air with water) until the injured person has been removed from the work area.
- (D) Notify, before actual removal of the asbestos material, the local police and fire departments to the danger of entering the excavated area where removal is taking place. Contractor shall make every effort to help these agencies form plans of action should their personnel need to enter the contaminated area.

79.11.1.9 SUBMITTALS

- (A) Construction Submittals:

Five (5) business days prior to excavating within three (3) feet of existing Transit Authority ducts which may contain asbestos-containing materials, the Contractor shall submit three (3) copies of the Contractor's detailed plan of action including the following items, bound and indexed. At this time and prior to this excavation work a meeting will be scheduled by the City of New York Department of Design and Construction. This meeting shall be attended by the Contractor and the Contractor's Subcontractor(s), a designated representative of the City of New York third party air monitoring firm and the Engineer.

- (a) Contractor's scope of work, work plan and schedule.
- (b) Notifications to Government Agencies.

- (c) Copies of permits, clearance and licenses if required.
- (d) Schedules: The Contractor shall provide to the Engineer a copy of the following schedules for approval. Once approved, schedules shall be maintained and updated as received. The Contractor shall post a copy of all schedules at the site:
 - (1) A construction schedule stating critical dates of the project including, but not limited to, mobilization, work area preparation, demolition, gross removal, fine cleaning, encapsulation, inspections, clearance monitoring, and phase of refinishing and final inspections. The schedule shall be updated biweekly, at a minimum.
 - (2) A schedule of staffing stating number of workers per shift per activity, name and number of supervisor(s) per shift, shifts per day, and total days to be worked.
 - (3) Submit all changes in schedule or staffing to the Engineer prior to implementation.
 - (4) A schedule of equipment to be used including numbers and types of all major equipment such as HEPA Air Filtration Units, HEPA-vacuums, airless sprayers, Water Atomizing Devices and Type "C" compressors.
- (e) A written plan and shop drawings for preparation of work site and decontamination chamber.
- (f) Description of protective clothing and approved respirator to be used, make, model, NIOSH approval numbers.
- (g) Delineation of responsibility of work site supervision, including competent person, with names, resumes, and home telephone numbers.
- (h) Explanation of decontamination sequence and isolation techniques.
- (i) Description of specific equipment to be utilized, including make and model number of air filtration devices, vacuums, sprayers, etc.
- (j) Description of any prepared methods, procedures, techniques, or equipment other than those specified in the contract documents.
- (k) Explanation of the handling of contaminated wastes including EPA and NYCDEP identification numbers of Waste Hauler.
- (l) Description of the final clean-up procedures to be used.
- (m) Name and qualifications of Contractor's testing laboratory including AIHA accreditation, and proof of NIOSH PAT and NIST/NVLAP Bulk Quality Assurance Proficiency of OSHA samples for approval by the City of New York Department of Design and Construction.
- (n) Written description of emergency procedures to be followed in case of injury or fire. This section must include evacuation procedures, source of medical assistance (name and telephone number) and procedures to be used for access by medical personnel (examples: first aid squad and physician). NOTE: Necessary Emergency Procedures Shall Take Priority Over All Other Requirements Of These Specifications.
- (o) Material Safety Data Sheets (MSDS) for encapsulants, sealants, firestopping foam, cleaners/disinfectants, spray adhesive and any and all potentially hazardous materials that may be employed on the project. No work involving the aforementioned will be allowed to proceed until MSDS are reviewed.
- (p) Worker Training And Medical Surveillance: Contractor shall submit a list of the persons who will be employed by The Contractor and the Contractor's Subcontractors in the removal work.

Present evidence that workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.

(q) Logs: Specimen copies of daily progress log, visitor's log, and disposal log.

(1) The Contractor shall provide a permanently bound log book of minimum 8-1/2" x 11" size at the entrance to the Worker and Waste Decontamination enclosure system as hereinafter specified. Log book shall contain on title page the project name, name, address and phone number of Environmental Control Representative; name, address and phone number of Abatement Contractor; name, address and phone number of Contractor and City's air testing entity; and, emergency numbers including, but not limited to local Fire/Rescue Department. Log book shall contain a list of personnel approved by the laboratory for entry into the work area.

(2) All entries into the log shall be made in nonwashable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted. Any significant events occurring during the abatement project shall be entered into the log. Upon completion of the job, the Contractor shall submit the logbook containing a day-to-day record of personnel log entries countersigned by the Project Monitor everyday.

(r) Worker's Acknowledgments: Submit statements signed by each employee that the employee has received training in the proper handling of ACM understands the health implications and risks involved; and understands the use and limitations of the respiratory equipment to be used.

(B) Copies of the following items shall be submitted to the Project Monitor during the work:

(1) Security and safety logs showing names of person entering workspace, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.

(2) Progress logs showing the number of workers, supervisors, hours of work and tasks completed daily to the Engineer.

(3) Contractor's current work progress for review by the Engineer at weekly progress meetings.

(4) All Contractors' air monitoring and inspection results.

(C) Project Closeout Submittals:

Upon completion of the project and as a condition of acceptance, the Contractor shall present two (2) copies of the following items, bound and indexed:

(1) Lien Waivers from Contractor, Subcontractors and Suppliers,

(2) Daily OSHA air monitoring results,

(3) All Waste Manifests (Asbestos and Construction Debris), seals and disposal logs,

(4) Field Sign-In/Sign-Out Logs for every shift,

(5) A Letter of Compliance stating that all the work on this project was performed in accordance with the specifications and all applicable Federal, State and Local regulations,

(6) All Warranties as stated in the specifications,

(7) Fully executed disposal certificates and transportation manifest.

79.11.1.10 QUALITY ASSURANCE

- (A) All work required for the completion of this project or called for in this specification must be executed in a workmanlike manner by using the appropriate methods established by regulatory requirements and/or industrial standards. All workmanship or work methods are subject to review and acceptance by the Engineer. Throughout the specification, reference is made to codes and standards which establish qualities, levels or types of workmanship which will be considered acceptable. It is the Abatement Contractor's responsibility to comply with these codes and standards during the execution of this work.
- (B) All materials and equipment required or consumed during the work of this contract must meet the minimum acceptable criteria established by codes and standards referenced elsewhere in this specification. Materials and equipment must be submitted for prior approval as part of the Contractor's "Shop Drawings".
- (C) It is the Abatement Contractor's responsibility, when so required by the specification or upon written request from the Commissioner or the Commissioner's representative to furnish all required proof that workmanship, materials and/or equipment meet or exceed the codes and standards referenced. Such proof shall be in the form requested, typically a certified report or test conducted by a testing entity approved for that purpose by DDC.
- (D) The Contractor shall furnish proof that employees working under the Contractor's supervision have had instruction on the dangers of asbestos exposure, on respirator use, decontamination, and OSHA regulations. This proof shall be in the form of a notarized affidavit to the effect that the above requirements have been satisfied. In addition, the Contractor shall have posted in the clean room of the decontamination enclosure unit all state and city certification of all workers involved in the handling and removal of asbestos.
- (E) The Contractor will have at all times in the Contractor's possession and in view at the job site the OSHA regulations 29 CFR 1910.1001, and 1926.1101 Asbestos, and Environmental Protection Agency 40 CFR, Part 61, subpart B: National Emission Standard for asbestos, asbestos stripping, work practices and disposal of asbestos waste. The Contractor shall also have one copy of NYC Title 15, Chapter 1 of RCNY and NYS DOL ICR 56 at the job site at all times.
- (F) Familiarity With Pertinent Codes And Standards: In procuring all items used in this work, it is the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements, and are suitable for their intended use.
- (G) Rejection Of Noncomplying Items: The Commissioner reserves the right to reject items incorporated into the work that fail to meet the specified minimum requirements. The Commissioner further reserves the right, and without prejudice to other recourse that maybe taken, to accept noncomplying items subject to test and approval by the City.
- (H) Applicable Regulations, Codes And Standards: Applicable standards listed in these specifications include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:
- (1) United States Environmental Protection Agency (EPA or USEPA)
Region II
Asbestos NESHAPS Contact
Air And Waste Management Division
(Air Compliance Branch) - USEPA
290 Broadway, 21st Floor
New York, New York 10007-1866
212-637-3660

- (2) Occupational Safety and Health Administration (OSHA)
Region II - Regional Office
201 Varick Street, Room 908
New York, New York 10014
212-337-2378
 - (3) National Electrical Code (NEC)
See NFPA
 - (4) National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, Massachusetts 02169-7471
617-770-3000
 - (5) National Institute for Occupational Safety and Health (NIOSH)
Robert A. Taft Laboratory
4676 Columbia Parkway
Mailstop R12 Cincinnati, Ohio 45226
513-841-4428
 - (6) Department of Health and Mental Hygiene (DOHMH)
Environmental Investigation
125 Worth Street
New York, New York 10013
212-442-3372
 - (7) American National Standards Institute (ANSI)
(Successor to USASI and ASA)
25 West 43rd Street (between 5th and 6th Avenue), 4th Floor
New York, New York 10036
212-642-4900
 - (8) American Society for Testing and Materials (ASTM)
100 Bar Harbor Drive
West Conshohocken, Pennsylvania 19428-2959
610-832-9500
 - (9) New York City Department of Environmental Protection (NYCDEP)
Bureau of Environmental Compliance
Asbestos Control Program
59-17 Junction Boulevard, 8th Floor
Corona, New York 11368
718-595-3682
 - (10) New York City Department of Sanitation
125 Worth Street, Room 714
New York, New York 10013
212-566-1066
 - (11) New York State Department of Labor (NYSDOL)
Division Of Safety And Health
Engineering Services Unit
State Office Building Campus
Albany, New York 12240-0010
- (I) Post all applicable regulations in a conspicuous place at the job site. Assure that the regulations are not altered, defaced or covered by other materials. One copy of each regulation must also be kept at the Contractor's office.

79.11.1.11 CITY/CONTRACTOR RESPONSIBILITIES

- (A) The City will not enter the portions of the excavation, in which work is being performed during the entire asbestos removal operation, including completion of clean up.
- (B) The Contractor shall provide a plan for 24-hours job security both for prevention of theft and for barring entry of curious but unprotected personnel into work areas.
- (C) The Contractor shall provide own means of power if needed and the City will not be held responsible for the downtime due to faulty Contractor's equipment.
- (D) The Contractor shall provide all electrical, water, and waste connections, tie-ins, extensions, and construction materials, supplies, etc. At the end of each shift, the Contractor shall disconnect all hoses within the work zone and place in equipment room of the worker decontamination unit. The Contractor shall ensure positive shutoff of all water to work area during nonworking hours.
- (E) All temporary facilities required to be installed, shall be subject to the approval of the Commissioner. Prior to starting the work at any site; specify clearly the temporary locations of facilities preferably with sketches and submit the same to the Engineer for approval.
- (F) The Contractor shall provide water needed to conduct the required asbestos abatement. All temporary plumbing or adaptations to supply the needs of the work area shall be installed and removed by the Contractor. Shower water for the decontamination unit shall be provided hot. Heating of water, if necessary, shall be provided by the Contractor.
- (G) Any additional electrical equipment (i.e. transformers, etc.), which is necessary shall be provided by the Contractor.
- (H) The Contractor shall provide fire protection in accordance with all State and Local fire codes.
- (I) Any parts of the service lines, within the excavated work area, disturbed or damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the Contractor to the satisfaction of the respective utility company.
- (J) Contractor shall supply hot shower water necessary for use in the decontamination unit.

79.11.1.12 USE OF THE AREA

- (A) The Contractor shall confine Contractor's apparatus, the storage of materials, and supplies, and the operation of the Contractor's workmen to limits established by law, ordinances, and the directions of the Engineer. All flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Engineer.
- (B) The Contractor shall assure of a clear path out of the excavated area, that appropriate safety barriers are established to prevent access, and that work areas are kept neat, clean, and safe.
- (C) All surrounding work, fixtures, soil lines, drains, water lines, gas pipes, electrical conduit, wires, utilities, etc. which are to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the City in accordance with the terms of this contract.
- (D) Attention is specifically drawn to the fact that other contractors, performing the work of other contracts, may be (or are) brought upon any of the work sites of this contract. Therefore, the Contractor shall not have exclusive rights to any site of work and shall fully cooperate and coordinate Contractor's work with the work of other contractors who may be on (or are on) any site of the work of this contract. Regulated area exempted.
- (E) Temporary toilet facilities must be provided by the Contractor on the site. Coordinate location of such facilities with the Engineer.

79.11.1.13 PROTECTION AND DAMAGE

- (A) The Contractor is responsible to cover and protect all equipment that cannot be removed from work areas.
- (B) No materials or debris shall be thrown within the excavated area.
- (C) Debris shall be removed from the work site daily. Work area shall be left neat and clean after each work shift, so that work may proceed the next regular workday without interruption. Limited bag storage may take place within the work area when approved by the Engineer.

79.11.1.14 RESPIRATORY PROTECTION REQUIREMENTS

- (A) Respiratory protection shall be worn by all individuals who may be exposed to asbestos fibers from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring in accordance with regulations and these specifications.
- (B) The Contractor shall develop and implement a written respiratory protection program with required site-specific procedures and elements. The program shall be administered by a properly trained individual. The written respiratory protection program shall include the requirements set forth in OSHA Standard 29 CFR 1910.134, at a minimum.
- (C) The Contractor shall provide workers with individually issued and marked respiratory equipment. Respiratory equipment shall be suitable for the asbestos exposure level(s) in the work area(s), as specified in OSHA Standards 26 CFR 1910.134 and 29 CFR 1926.1101, NIOSH Standard 42 CFR 84, or as more stringently specified otherwise, herein.
- (D) Where respirators with disposable filter parts are employed, the Contractor will provide sufficient filter parts for replacement as necessary or as required by the applicable regulation.
- (E) All respiratory protection shall be NIOSH approved. All respiratory protection shall be provided by the Contractor, and used by workers in conjunction with the written respiratory protection program.
- (F) Contractor shall provide respirators selected by an Industrial Hygienist that meet the following requirements:

AIRBORNE CONCENTRATION OF ASBESTOS OR CONDITIONS OF USE	REQUIRED RESPIRATOR
Not in excess of 1-fibers per cubic centimeter (f/cc), ten (10) times Permissible Exposure Level (PEL)	Half-mask air purifying respirator, other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5-f/cc, 50 times PEL	Full face-piece air-purifying respirator equipped with high efficiency filters.
Not in excess of 100-f/cc, 1,000 times PEL	Powered air purifying respirator equipped with equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100-f/cc, 1,000 times PEL	Full face-piece supplied air respirator operate in pressure demand mode.
Greater than 1,000-f/cc, 10,000 times PEL, or unknown concentration	Full face-piece supplied air respirator operate in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

- (G) Selection of high efficiency filters:

- (1) All high efficiency filters shall have a nominal efficiency rating of 100 (99.97-percent effective) when tested against 0.3-micrometer monodisperse diethyl-hexyl phthalate (DOP) particles.

- (2) Choose N-, R-, or P- series filters based upon the presence or absence of oil particles.
 - (a) N- series filters shall only be used for non-oil solid and water based aerosols or fumes.
 - (b) R- and P -series filters shall be used when oil aerosols or fumes (i.e., lubricants, cutting fluids, glycerin, etc.) are present. The R- series filters are oil resistant and the P- series filters are oil proof.
 - (c) Follow filter manufacture recommendations.
- (3) If a vapor hazard exists, use an organic vapor cartridge in combination with the high efficiency filter.
- (H) Historical airborne fiber level data may serve as the basis for selection of the level of respiratory protection to be used for an abatement task. Historical data provided by the Contractor shall be based on personal air monitoring performed during work operations closely resembling the processes, type of material, control methods, work practices, and environmental conditions present at the site. Documentation of aforementioned results may be requested by the City and/or Testing Laboratory for review. This will not relieve the Contractor from providing personal air monitoring to determine the time-weighted average (TWA) for the work under contract. The TWA shall be determined in accordance with 29 CFR 1926.1101.
- (I) At no time during actual removal operations shall half-mask air purifying respirators be allowed unless a full 8-hour TWA and excursion limit have been conducted, and reviewed by the Project Monitor. Use of single use dust respirators is prohibited for the above respiratory protection.
- (J) Workers shall be provided with personally issued and individually marked respirators. Respirators shall not be marked with any equipment that will alter the fit of the respirator in any way. Only waterproof identification markers shall be used.
- (K) The Contractor shall ensure that the workers are qualitatively or quantitatively fit tested by an Industrial Hygienist initially and every 12-months thereafter with the type of respirator the Contractor will be using.
- (L) Whenever the respirator design permits, workers shall perform the positive and negative air pressure fit test each time a respirator is worn. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.
- (M) No facial hairs (beards) shall be permitted to be worn when wearing respiratory protection that requires a mask-to-face seal.
- (N) If a worker wears glasses, a spectacle kit to fit their respirator shall be provided by the Contractor at the Contractor's expense.
- (O) Respiratory protection maintenance and decontamination procedures shall meet the following requirements:
 - (1) Respirators shall be inspected and decontaminated on a daily basis in accordance with OSHA 29 CFR 1910.134 (b); and,
 - (2) High efficiency filters for negative pressure respirators shall be changed after each shower; and,
 - (3) Respiratory protection shall be the last piece of worker protection equipment to be removed. Workers must wear respirators in the shower when going through decontamination procedures as stated in **Subsection 79.11.3.3**; and,
 - (4) Airline respirators with high efficiency filtered disconnect shall be disconnected in the equipment room and worn into the shower. Powered air-purifying respirator face pieces shall be worn into

the shower. Filtered/power pack assemblies shall be decontaminated in accordance with manufacturers recommendations; and,

- (5) Respirators shall be stored in a dry place and in such a manner that the face-piece and exhalation valves are not distorted; and,
 - (6) Organic solvents shall not be used for washing of respirators.
- (P) Authorized visitors shall be provided with suitable respirators and instruction on the proper use of respirators whenever entering the work area. Qualitative fit test shall be done to ensure proper fit of respirator.

79.11.1.15 PROTECTIVE CLOTHING

- (A) Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work. Provide to all workers, foremen, superintendents, authorized visitors and inspectors, protective disposable clothing consisting of full-body coveralls, head covers, gloves and 18-inch high boot type covers or reusable footwear.
- (B) In addition to personal protective equipment for workers, the Contractor shall make available at each worksite at least four (4) additional uniforms and required respiratory equipment each day for personnel who are authorized to inspect the work site. The Contractor shall also provide, for the duration of the work at any site involving a decontamination unit for worksite access, a lockable storage locker for use by the Engineer. In addition to respiratory masks for workers, the Contractor must have on hand at the beginning of each work day, at least four (4) masks each with two (2) sets of fresh filters, for use by personnel who are authorized to inspect the worksite. The Contractor shall check for proper fit of the respirators of all City personnel authorized to enter the work area.
- (C) Asbestos handlers involved in tent procedures shall wear two (2) disposable suits, including gloves, hood and footwear, and appropriate respiratory equipment. All street clothes shall be removed and stored in a clean room within the work site. The double layer personal protective equipment shall be used for installation of the tent and throughout the procedure, if a decontamination unit (with shower and clean room) is contiguous to the work area, only one (1) layer of disposable personal protective equipment shall be required; in this case, prior to exiting the tent the worker shall HEPA vacuum and wet clean the disposable suit.

The outer disposable suit (if two (2) suits are worn) shall be removed and remain in the tent upon exiting. Following the tent disposal and work site clean up the workers shall immediately proceed to a shower at the work site. The inner disposal unit and respirator shall be removed in the shower after appropriate wetting. The disposal clothing shall be disposed of as asbestos-containing waste material. The workers shall then fully and vigorously shower with supplied liquid bath soap, shampoo, and clean dry towels.

- (D) Coveralls: Provide disposable full-body coveralls and disposable head covers. Require that they be worn by all workers in the work area. Provide a sufficient number for all required changes for all workers in the work area.
- (E) Boots: Provide work boots with non-skid soles, and where required by OSHA, foot protection, for all workers. Provide boots at no cost to workers. Paint uppers of all boots yellow with waterproof enamel. Do not allow boots to be removed from the work area for any reason after being contaminated with ACM and/or dust.
- (F) Hard Hats: Provide hard hats as required by OSHA for all workers, and provide a minimum of four (4) spares for Inspectors, visitors, etc. Label all hats with same warning label as used on disposal bags. Require hard hats to be worn at all times that work is in progress that may cause potential head injury. Provide hard hats of the type with polyethylene strap suspension. Require hats to remain in the work area throughout the work. Thoroughly clean and decontaminate and bag hard hats prior to removing them from the work area at the end of the work.

- (G) Goggles: Provide eye protection (goggles) as required by OSHA for all workers involved in any activity that may potentially cause eye injury. Require them to be worn at all times during these activities. Thoroughly clean and decontaminate goggles before removing them from the work area.
- (H) Gloves: Provide work gloves to all workers, of the type dictated by the work and OSHA Standards. Do not remove gloves from the work area. Dispose of as asbestos-contaminated waste at the end of the work. Gloves shall be worn at all times, except during work area preparation activities that do not disturb ACM.
- (I) Reusable footwear, hard hats and eye protection devices shall be left in the contaminated Equipment Room until the end of the asbestos abatement work.
- (J) Disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the workspace to the outside through the decontamination facility.
- (K) Respirators, disposable coveralls, head covers and foot covers shall be provided by the Contractor for the Project Monitor, Engineer and any other authorized representative who may inspect the work area. Provide two (2) respirators and six (6) respirator filter changes per day.

79.11.1.16 AIR MONITORING - CONTRACTOR

- (A) The Contractor shall employ a qualified Industrial Hygiene Laboratory to analyze air samples in accordance with OSHA Regulations, 1926.1101 (Asbestos Standards for Construction) and New York City regulations.
- (B) The Industrial Hygiene Laboratory shall be a current proficient participant in the American Industrial Hygiene Association (AIHA) PAT Program. The laboratory identification number shall be submitted and approved by the City. The laboratory shall be accredited by the AIHA and New York State Department of Health Environmental Laboratory Approval Program (ELAP).
- (C) The Industrial Hygiene Laboratory shall also be a current proficient participant in the NIST/NVLAP Quality Assurance Program for the identification of bulk samples. Laboratory identification number shall be submitted to and approved by the City.
- (D) The Contractor shall require a competent person (as defined in OSHA 1926.1101) to perform the following functions and to be on-site continuously for the duration of the project:
 - (1) Monitor the set up of the work area enclosure and ensure its integrity.
 - (2) Control entry and exit into the work enclosure.
 - (3) Ensure that employees are adequately trained in the use of engineering controls, proper work practices, proper personal protective equipment and in decontamination procedures.
 - (4) Insure that employees use proper engineering controls, proper work practices, proper personal protective equipment and proper decontamination procedures.
 - (5) The competent person (as defined in OSHA 1926.1101) shall check for rips and tears in work suits, and ensure that they are mended immediately or replaced.
- (E) Air monitoring responsibilities, shall be performed by a representative of the testing laboratory retained by the Contractor.
- (F) Contractor shall submit to the City all credentials of the designated (as defined in OSHA 1926.1101) and Industrial Hygiene Laboratory representative for approval.
- (G) Air monitoring and inspection shall be conducted by the Contractor's competent person (as defined in OSHA 1926.1101).

- (H) Continuous (daily or per shift) monitoring and inspection will include work area samples, personnel samples from the breathing zone of a worker to accurately determine the employees' 8-hour TWA (unless Type C respirators are used) and decontamination unit clean room samples.
- (I) Work area samples and employee personnel samples shall be taken using pumps whose flow rates can be determined to an accuracy of ± 5 -percent, at a minimum of two (2) liters per minute. This must be demonstrated at the job site.
- (J) Sampling and analysis methods shall be per NIOSH 7400A.
- (K) Test Reports:
 - (1) Promptly process and distribute one (1) copy of the test results, to the Commissioner.
 - (2) Prompt reports are necessary so that if required, modifications to work methods and/or practices may be implemented as soon as possible.
 - (3) Contractor shall by facsimile notify the Commissioner within 24-hours of the results of each test, followed by written notification within three (3) days.
- (L) The Contractor's competent person shall conduct inspections and provide written reports daily. Inspections will include checking the standard operating procedures, engineering control systems, respiratory protection and decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project which may affect the health and safety of the people and environment.
- (M) The City reserves the right to conduct air and surface dust sampling in conjunction with and separate from the Testing Laboratory for the purposes of Quality Assurance.
- (N) All samples shall be accompanied by a Chain of Custody Record that shall be submitted to the Project Monitor upon completion of analysis.

79.11.1.17 TESTING LABORATORY

- (A) The City, at its own expense, will employ the services of an Independent Testing Laboratory. The Testing Laboratory will perform air sampling activities at the site and perform periodic observations of the work site.
- (B) The Laboratory will perform analysis of air samples utilizing phase contrast microscopy (PCM) and/or transmission electron microscopy (TEM). This laboratory shall meet the standards stated herein.
- (C) Observations will include, but not be limited to, checking the standard operating procedures, engineering control systems, respiratory protection, decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project that may affect the health and safety of the environment, Contractor, and/or facility occupants.
- (D) The Testing Laboratory shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the Contractor to verify that said performance complies with this specification. The Testing Laboratory shall be on site throughout the entire abatement operation.
- (E) The City will be responsible for costs incurred with the required laboratory work. Any subsequent additional testing required due to limits exceeded during initial testing shall be paid for by the Contractor.
- (F) At a minimum, air sampling shall be conducted in accordance with the following schedule:

ABATEMENT ACTIVITY	PRE-ABATEMENT	DURING ABATEMENT	POST- ABATEMENT
Equal to or greater than 10,000-square feet or 10,000-linear feet of ACM	PCM	PCM	TEM
Less than 10,000-square feet or 10,000-linear feet of ACM	PCM	PCM	PCM
Exceptions to the above:			
Boiler Rooms	PCM	PCM	PCM
Tent and Glovebag Procedures	PCM	PCM	PCM
Demolitions	PCM	PCM	PCM

Note: TEM is acceptable wherever PCM is required.

(G) Prior to commencement of abatement activities, the Testing Laboratory will collect a minimum number of area samples inside each homogeneous work area.

- (1) Samples will be taken during normal activities and circumstances at the work site.
- (2) Samplers shall be located within the proposed work area and at all proposed isolation barrier locations.
- (3) Samples shall be analyzed using PCM.
- (4) The number of samples to be collected will be determined by the size of the project.

(H) Area air sampling during abatement shall be conducted as specified in the following documents except as restricted or modified herein:

- (1) Measuring Airborne Asbestos Following An Abatement Action, US EPA document 600/4-85-049 (Nov., 1985);
- (2) Guidance For Controlling Asbestos-Containing Materials In Buildings; US EPA Publication 560/5-85-024 (June, 1984);
- (3) Methodology For The Measurement Of Airborne Asbestos By Electron Microscopy, US EPA Contract No. 68-02-3266;
- (4) Mandatory And Nonmandatory Electron Microscopy Methods, set forth in 40 CFR Part 763, Subpart E, Appendix A;
- (5) NIOSH 7400 method using "A" counting rules.

(I) In accordance with the above criteria, area samples (see NYCDEP Asbestos Control Program Regulations) shall conform to the following schedule:

AREA SAMPLES FOR ANALYSIS BY	MINIMUM VOLUME	FLOW RATE
PCM, 25-mm cassettes	560-liters	5 to 15-liters/minute
TEM, 25-mm cassettes	560-liters	1 to 10-liters/minute
TEM, 37-mm cassettes	1,250-liters	1 to 10-liters/minute

- (1) All costs resulting from additional air tests and observations shall be borne by the Contractor. These costs may include, but are not limited to, labor, analysis fees, materials, and expenses.
- (2) After the area has been found to be in compliance, the Contractor may remove Isolation Barriers, tents if any and perform final cleaning as specified.

(J) Clearance And Excavation Re-entry Criteria:

- (1) The clearance criteria shall be applied to each excavated work area independently.
- (2) For PCM analysis, the clearance air monitoring shall be considered satisfactory when all of the samples regardless of the size of the project are less than or equal to 0.01-f/cc or the background concentrations, whichever is greater.
- (3) For TEM analysis, the clearance air monitoring shall be considered satisfactory when the requirements stated in 40 CFR Part 763, Subpart E, Appendix A, Section IV are met.
- (4) As soon as the air monitoring tests are completed, the Testing Laboratory will send the results of such tests to the City and notify the Contractor.
- (5) The Contractor shall cooperate fully with all aspects of air monitoring operations.

79.11.1.18 TAMPERING WITH TEST EQUIPMENT

All parties to this contract are hereby notified that any tampering with testing equipment will be considered an attempt at falsifying reports and records to federal and state agencies and each offense will be prosecuted under applicable state and federal criminal codes to the fullest extent possible.

79.11.2 PRODUCTS**79.11.2.1 MATERIALS**

- (A) Wetting Agents: Surfactant shall consist of resin materials in a water base, that have been tested to ensure materials are nontoxic and nonhazardous. Surfactants shall be installed according to the manufacturer's written instructions.
- (B) Encapsulants (Sealants, Lockdown Encapsulants): Encapsulants shall consist of pigmented (nontransparent) liquid material which can be applied to asbestos containing materials or bare surfaces exposed after an abatement which temporarily controls the possible release of asbestos fibers from the material or surface either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). The encapsulant shall be installed according to the manufacturer's written instructions. Sealing materials to be applied to structural members and decking assemblies scheduled to receive spray-applied fireproofing shall be approved by UL for use with the specified material.
- (C) Fire Retardant Polyethylene Sheeting: Minimum uniform thickness of 6-mil. Provide largest size possible to minimize seams.
- (D) Fire Retardant Reinforced Polyethylene Sheeting: For covering floor of decontamination units, provide translucent, nylon reinforced or woven polyethylene laminated, fire retardant polyethylene sheeting. Provide largest size possible to minimize seams, minimum uniform thickness 6-mil.
- (E) Drums: Asbestos-transporting drums, sealable and clearly marked with warning labels as required by OSHA and EPA.
- (F) Polyethylene Disposal Bags: Asbestos disposal bags, minimum of 6-mil thick. Bags shall be clearly marked with warning labels as required by OSHA and EPA.
- (G) Signs: Asbestos warning signs for posting at perimeter of work area, as required by OSHA and EPA.
- (H) Waste Container Bag Liners And Flexible Trailer Trays: One piece leak-resistant flexible tray with absorbent pad.

- (I) Tape: Provide tape which is of high quality with an adhesive that is formulated to aggressively stick to sheet polyethylene.
- (J) Spray Adhesive: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
- (K) Flexible Duct: Spiral reinforced flex duct for air filtration devices.
- (L) Protective Clothing: Workers shall be provided with sufficient sets of properly fitting, full-body, disposable coveralls, head covers, gloves, and 18-inch high boot-type foot covers. Protective clothing shall conform to OSHA Standard 29 CFR 1926.1101.

79.11.2.2 TOOLS AND EQUIPMENT

- (A) Air Filtration Device (AFD): AFDs shall be equipped with High Efficiency Particulate Air (HEPA) filtration systems and shall be approved by and listed with Underwriter's Laboratory.
- (B) Transportation Equipment: Transportation Equipment, as required, shall be suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any temporary storage containers positioned outside the excavated work area for temporary storage shall be metal, closed and locked.
- (C) Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems.
- (D) Vacuum Attachments: Soft Brush Attachment, Asbestos Scraper Tool, Drill Dust Control Kit.
- (E) Electric Sprayer: An electric airless sprayer suitable for application of encapsulating material and shall be approved by and listed with Underwriters Laboratory.
- (F) Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for amended water application.
- (G) Water Atomizer: Powered air-misting device equipped with a ground fault interrupter and equipped to operate continuously.
- (H) Brushes: All brushes shall have nylon bristles. Wire brushes are excluded from use due to their potential to shred asbestos fibers into small, fine fibers. Wire brushes may be used for cleaning duct joints within glove-bags upon written approval of the Engineer.
- (I) Hand Power Tools: Shall be equipped with HEPA-filtered local exhaust ventilation if used to drill, cut into or otherwise disturb ACM.
- (J) Other Tools And Equipment: The Contractor shall provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to: hand-held scrapers, sponges, rounded-edge shovels, brooms, and carts.
- (K) Fans And Leaf Blower: Provide Leaf Blower (one leaf blower per floor) and one 20-inch diameter fans for each 10,000-cubic feet of work area volume to be used for aggressive sampling technique for clearance air testing.
- (L) Fire Extinguishers: Provide type "A" fire extinguishers in spaces where there is minimal danger of electrical or grease-oil-flammable liquid fires. In other areas, provide type "ABC" dry chemical extinguishers of NFPA recommended types for the exposure in each case. All fire extinguishers shall comply with the applicable recommendations of NFPA Standard 10, "Standard For Portable Extinguishers." Provide a minimum of four (4) fire extinguishers in each work area; one in the equipment room of the decontamination unit, one outside the work area in the clean room or directly

outside same, and two fire extinguishers where they are most effective for their intended purpose. Do not exceed seventy-five (75) feet between fire extinguishers within the work area.

(M) First Aid Kits: The Contractor shall maintain adequately stocked first aid kits in the clean rooms of the decontamination units and within work areas. The first aid kit shall be approved by a licensed physician for the work to be performed under this contract.

(N) Water Service:

Water Heater: Provide UL rated 40-gallon electric water heaters to supply hot water for Personal Decontamination Enclosure System Shower. Wiring of the water heater shall comply with NEMA, NECA, and UL standards.

(O) Telephone Paging Device:

The Contractor or the Contractor's authorized representative shall, at all times during the normal workday or during periods of overtime work under this contract, carry a digital telephone paging device ("Beeper") and cellular telephones which can be activated by a telephone number in the 212 or 646 or 718 or 917 area code. The Contractor shall supply the Department of Design and Construction with the activation number for the device and the Contractor is liable to respond back to the calls from DDC within the next one (1) hour period after the Contractor receives calls from DDC. The cost for this device and all charges accruing shall be deemed included in all scheduled items of work.

79.11.2.3 CLEANING

(A) Throughout the construction period, the Contractor shall maintain the work area as described in this section.

(1) The Contractor shall prevent excavated areas other than the work area from becoming contaminated with asbestos-containing dust or debris. Should areas outside the work area become contaminated with asbestos-containing dust or debris as a consequence of the Contractor's work practices, the Contractor shall be responsible for cleaning these areas in accordance with the procedures appended in Title 15, Chapter 1 of RCNY and NYSDOL ICR56.

(2) The Contractor shall provide to all personnel and laborers the required equipment and materials needed to maintain the specified standard of cleanliness.

(B) General:

(1) Waste water from asbestos removal operations, including shower water, may be discharged into the public sewer system only after filtration by an approved device capable of at least 5-micron particle size collection to remove asbestos fibers.

(2) Asbestos wastes shall be double bagged in six (6) mil (0.006") polyethylene bags approved for ACM disposal and shall be properly labeled and handled before disposal.

(3) The Contractor shall use corrugated cartons or drums for disposal of asbestos-containing waste having sharp edged components (e.g. nails, screws, metal lathe and tin sheeting) that may tear polyethylene bags and sheeting. The waste within the drums or cartons must be double bagged.

(4) The Contractor shall transport all bags of waste to disposal site in thirty (30) gallon capacity metal or fiber drums with tight lids, or in locked steel dumpster.

(5) Dumping of debris, waste or bagged waste will not be permitted.

(6) Cleanup of visible accumulations of loose ACM shall occur whenever there is a sufficient amount to fill a single asbestos bag.

- (7) ACM shall be collected utilizing rubber dust pans and rubber squeegees.
- (8) HEPA vacuums shall not be used on wet materials unless specifically designed for that purpose.
- (9) Metal shovels shall not be used within the work area.
- (10) Accumulations of dust shall be cleaned off all surfaces of the work area daily.
- (11) Mastic solvent when used will be applied in moderation (e.g. by airless sprayer).
- (12) The Contractor shall retain all items in the storage area in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection of all materials.
- (13) The Contractor shall not allow accumulation of scrap, debris, waste material, and other items not required for use in this work. Asbestos contaminated waste must not be kept on the work site overnight.
- (14) At least twice a week (more if necessary), the Contractor shall completely remove all scrap, debris and waste material from the job site.
- (15) The Contractor shall provide adequate storage space for all items awaiting removal from the job site, observing all requirements for fire protection and concerns for the environment.
- (16) All respiratory protection equipment shall be selected from the latest NIOSH Certified Equipment list.
- (17) Daily and more often, if necessary, the Contractor shall inspect the work areas and adjoining spaces, and pick up all scrap, debris, and waste material. All such items shall be removed to the place designated for their storage.
- (18) Weekly, and more often, if necessary, the Contractor shall inspect all arrangements of materials stored on the site; re-stack and tidy them or otherwise service them to meet the requirements of these specifications.
- (19) The Contractor shall maintain the site in a neat and orderly condition at all times.

79.11.3 EXECUTION

79.11.3.1 WORKER DECONTAMINATION FACILITY

(A) Large Asbestos Projects (Small Project Option):

Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Worker decontamination shall be in accordance of the NYCDEP approved procedure for removing asbestos containing duct Insulation.

(a) Structure:

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16-inches on-center.
- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
- (3) Interior shall be covered with two (2) layers of opaque 6-mil polyethylene sheeting, with a minimum overlap of 12-inches at seams. Seal seams airtight using tape and adhesive.

The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve (12) inches.

- (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into work area.
- (b) Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
- (c) Air Locks: Air locks shall consist of two curtained doorways placed a minimum of three (3) feet apart.
- (d) Decontamination Enclosure System shall be placed adjacent to the work area and shall consist of three (3) totally enclosed chambers, separated from work area and each other by airlocks, as follows:
 - (1) Equipment Room: The equipment room shall have a curtain doorway to separate it from the work area, and share a common airlock with the shower room. The equipment room shall be large enough to accommodate at least one (1) worker (allowing them enough room to remove their protective clothing and footwear), and a 6-mil disposal bag for collection of discarded clothing and equipment. The equipment room shall be utilized for the storage of equipment and tools after decontamination using a HEPA-vacuum and/or wet cleaning. A one-day supply of replacement filters, in sealed containers, for HEPA-vacuums and negative air machines, extra tools, containers of surfactant, and other materials and equipment required for the project shall be stored here. A walk-off pan filled with water shall be placed in the work area just outside the equipment room for persons to clean foot coverings when leaving the work area. Contaminated footwear and reusable work clothing shall be stored in this room.
 - (2) Shower Room: The shower room shall have two (2) airlocks (one that separates it from the equipment room and one that separates it from the clean room). The shower room shall contain at least one (1) shower, with hot and cold water adjustable at the tap, per eight (8) workers. Careful attention shall be given to the shower to ensure against leaking of any kind. Contractor shall supply towels, shampoo and liquid soap in the shower room at all times. Shower water shall be drained collected, and filtered through a system with at least a 5-micron particle size collection capacity. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filters by large particles. Filtered water shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.
 - (3) Clean Room: The clean room shall share a common airlock with the shower room and shall have a curtained doorway to separate it from outside noncontaminated areas. Lockers, for storage of workers' street clothing, and shelves, for storing respirators, shall be provided in this area. Clean disposable clothing, replacement filters for respirators, and clean dry towels shall be provided in the clean room. The clean room shall not be used for the storage of tool, equipment or other materials.

(B) Small Asbestos Projects:

Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the work areas.

(a) Structure:

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16-inches on-center.

- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
 - (3) Interior shall be covered with two (2) layers of opaque 6-mil polyethylene sheeting, with a minimum overlap of 12-inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve (12) inches.
 - (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into work area.
- (b) Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
- (c) Air Locks: Air locks shall consist of two (2) curtained doorways placed a minimum of three (3) feet apart.
- (d) Decontamination Enclosure System shall be placed adjacent to the work area and shall consist of three (3) totally enclosed chambers, separated from work area and each other by airlocks, as follows:
- (1) Shower Room: The shower room shall have two (2) airlocks (one that separates it from the work area and one that separates it from the clean room). The shower room shall contain at least one (1) shower, with hot and cold water adjustable at the tap, per eight (8) workers. Careful attention shall be given to the shower to ensure against leaking of any kind. The Contractor shall supply towels, shampoo and soap in the shower room at all times. Shower water shall be drained collected, and filtered through a system with at least a 5-micron particle size collection capacity. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filters by large particles. Filtered water shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.
 - (2) Clean Room: The clean room shall share a common airlock with the shower room and shall have a curtained doorway to separate it from outside noncontaminated areas. Lockers, for storage of workers' street clothing, and shelves, for storing respirators, shall be provided in this area. Clean disposable clothing, replacement filters for respirators, and clean dry towels shall be provided in the clean room. The clean room shall not be used for the storage of tools, equipment or other materials.
- (C) Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Contractor, and as specified herein.

79.11.3.2 WASTE DECONTAMINATION FACILITY

(A) Large Asbestos Project (Small Project Option):

Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the work areas.

(a) Structure:

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16-inches on-center.

- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
 - (3) Interior walls shall be covered with two (2) layers of opaque 6-mil polyethylene sheeting, with a minimum overlap of 12-inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve (12) inches.
 - (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into the work area.
- (b) Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
 - (c) Air Locks: Air locks shall consist of two (2) curtained doorways placed a minimum of three (3) feet apart.
 - (d) Decontamination Enclosure System shall be placed adjacent to the work area and shall consist of three (3) totally enclosed chambers, separated from the work area and each other by airlocks, as follows:
 - (1) Washroom: An equipment washroom shall have two (2) air locks (one separating the unit from the work area and one common air lock that separates it from the holding area. The washroom shall have facilities for washing material containers and equipment. Gross removal of dust and debris from contaminated material containers and equipment shall be accomplished in the work area, prior to moving to the washroom.
 - (2) Holding Area: A holding area shall share a common air lock with the equipment washroom and shall have a curtained doorway to outside areas. A hinged, lockable door shall be placed at the holding area entrance to prevent unauthorized access into the work area.
- (B) Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Contractor, and as specified herein.

79.11.3.3 PERSONNEL ENTRANCE AND DECONTAMINATION PROCEDURES FOR REMOVAL OPERATIONS UTILIZING REMOTE DECONTAMINATION FACILITIES

- (A) All individuals who enter the work area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall fully identify the facility, agents, contractor(s), the project, each work area, and worker respiratory protection employed. The job supervisor shall be responsible for the maintenance of the log during the abatement activity.
- (B) Each worker shall remove street clothes in the clean room; wear two (2) disposable suits, including gloves, hoods and non-skid footwear; and put on a clean respirator (with new filters) before entering the work area.
- (C) Each worker shall, before leaving the work area or tent, clean the outside of the respirators and outer layer of protective clothing by wet cleaning and/or HEPA-vacuuming. The outer disposable suit shall be removed in the airlock prior to proceeding to the Worker Decontamination Unit. The inner disposable suit and respirator shall be wet wiped and HEPA-vacuumed thoroughly before removing and prior to aggressive shower.

- (D) Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately.

79.11.4 PREPARATION OF WORK AREA AND REMOVAL PROCEDURES

79.11.4.1 REMOVAL OF ASBESTOS-CONTAINING MATERIAL

- (A) Contractor shall be responsible for the proper removal of ACM from the work area using standard industry techniques. The Testing Laboratory representative shall observe the work.

General Requirements:

- (a) Removal of ACM shall be performed using wet methods. Dry removal of ACM is prohibited.
- (b) Spray ACM with amended water with sufficient frequency and quantity to enhance penetration. Sufficient time shall be allowed for amended water to penetrate the material to the substrate prior to removal. All ACM shall be thoroughly wetted while work is being conducted.
- (c) Accumulation of standing water on the floor of the work area is prohibited.
- (d) Apply removal encapsulants, when used, in accordance with the manufacturer's recommendations and guidelines.
- (e) Containerize ACM immediately upon detachment from the substrate.
- (f) Pre-Removal Inspections:
 - (1) Prior to removal of any ACM, the Contractor shall notify the Testing Laboratory and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Testing Laboratory.
 - (2) Contractor shall correct any deficiencies observed by Testing Laboratory at no additional cost to City.
 - (3) Following the Testing Laboratory's approval of the work area preparations, removal of ACM may commence.

- (B) Removal of Duct Insulation shall be as follows:

Work shall be performed as outlined in the Duct Insulation removal procedures (see Appendix) approved by the New York City Department of Environmental Protection (NYCDEP).

79.11.4.2 MAINTENANCE OF CONTAINED WORK AREA AND DECONTAMINATION ENCLOSURE SYSTEMS

- (A) Ensure that barriers are installed in a manner appropriate to the expected weather conditions during the project and for its duration. Repair damaged barriers and remedy defects immediately upon their discovery. Visually inspect barriers at the beginning and end of each work period.
- (B) Visually inspect nonwork areas and the decontamination enclosure system for water leakage. Perform the visual inspection a minimum of two (2) times for each 8-hour work shift.

79.11.5 ASBESTOS WASTE MANAGEMENT

79.11.5.1 ACM WASTE REQUIREMENTS

- (A) The Contractor and all subcontractors are specifically alerted to the illegal practice of combining asbestos-containing waste (ACW) from one project with the ACW of other projects without using the services of a permitted waste transfer station as defined by 6 NYCRR Part 360 and 364. As part of the shop drawing submittals, the Contractor must submit for approval the proposed method of transportation and disposal that will be utilized to manage the ACW of this contract. If a permitted transfer station is to be used, payment for the cost shall be made under the item labeled "ALLOWANCE FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING TRANSIT AUTHORITY DUCT INSULATION (REMOVAL OF ACM, REPLACEMENT WITH NON-ACM, AND SUPPORT AND PROTECTION OF EXISTING TRANSIT AUTHORITY DUCT, COMPLETE)". The Contractor must submit a waste manifest consistent with whatever approved method is utilized as part of the invoicing and payment procedures.
- (B) The Contractor shall maintain compliance with the strictest set of regulations of Title 15, Chapter 1 of RCNY, NYC LL 70/85, NYS DOL ICR 56, USEPA, Asbestos Regulation 40 CFR Section 61.152, 29 CFR 1926.1101, 29 CFR 1910.1200 (F) of OSHA's Hazard Communication Standards, and other applicable standards.

NOTE: Any penalties incurred for failure to comply with any of the above regulations and/or fines imposed due to negligence of the Contractor will be the sole responsibility of the Contractor.

When presenting ACW for storage at the generation site, the Contractor shall:

- (1) Wet down ACW in a manner sufficient to prevent all visible emissions of dust into the air.
- (2) Seal material in a leak tight container while wet.
- (3) Keep ACW separate from any other waste.

(C) When presenting ACW for storage away from the site of generation, the Contractor shall:

- (1) Ensure that ACW has been properly packaged as per requirements above.
- (2) Examine the containers of ACW to ensure that there are no breaks in the containers and that no visible dust is being released into the air.
- (3) If examination reveals damage to a container of ACW the Contractor or person accepting the waste shall immediately wet down the ACW and repackage it into a clean leak tight container. The subsequent repackaging shall be the financial responsibility of the Contractor and occur at no cost to the City.
- (4) Keep ACW separate from any other waste.

(D) When storing ACW - The Contractor shall:

- (1) Ensure that the ACW has been sufficiently wetted down in tight containers.
- (2) Rewet and repackage any damaged containers.
- (3) Maintain at storage site an adequate supply of spare leak tight containers.
- (4) Maintain at storage site an adequate supply of amended water.
- (5) Keep ACW separate from any other waste.
- (6) Keep ACW in a secured, enclosed, and locked container.
- (7) If the Contractor has intention of sorting a quantity of ACW greater than or equal to 50-cubic yards, the Contractor shall:

Submit a written request and receive written approval from the City.

(E) When presenting for transport, the Contractor shall:

- (1) Ensure that ACW has been sufficiently wetted down.
- (2) Examine the integrity of the container's airtight seal.
- (3) Rewet and repackage any damaged containers.
- (4) Keep ACW separate from all other waste.
- (5) Ensure that a person transporting asbestos waste holds a valid permit issued pursuant to law.
- (6) Frequency of waste removal:

Properly packaged and labeled asbestos waste shall be removed from the site on a daily basis. Under no circumstance shall asbestos waste be stored on site without written approval from the City. The Waste Hauler and landfill shall be as indicated on the notifications to regulatory agencies.

(F) Waste Load-Out Through Equipment Decontamination Enclosure (Full Decontamination Facility): Place asbestos waste in disposal bags. Large items not able to fit into disposal bags shall be insulationped in one (1) layer of 6-mil thick polyethylene sheeting. Clean outer covering of asbestos waste package by wet cleaning and/or HEPA-vacuuming in a designated part of the work area. Move insulationped asbestos waste to the equipment washroom, wet clean each bag or object and place it inside a second disposal bag, or a second layer of 6-mil polyethylene sheeting, as the item's physical characteristics demand. Air volume shall be minimized, and the bags or sheeting shall be sealed airtight with tape.

- (1) The clean containerized items shall be moved to the equipment decontamination enclosure holding area pending load-out to storage or disposal facilities.
- (2) Workers who have entered the equipment decontamination enclosure system from the uncontaminated nonwork area shall perform load-out of containers from the decontamination enclosure holding area. Dress workers moving asbestos waste to storage or disposal facilities in clean overalls of a color different than that of coveralls used in the work area. Ensure that workers do not enter from uncontaminated areas into the equipment washroom or the work area. Ensure that contaminated workers do not exit the work area through the equipment decontamination enclosure system.
- (3) Thoroughly clean the equipment decontamination enclosure system immediately upon completion of the waste load-out activities, and at the completion of each work shift.
- (4) Labeled ACM waste containers or bags shall not be used for non-ACM debris or trash. Any materials placed in labeled containers or bags, including those turned "inside-out", shall be handled and disposed of as ACM waste.

(G) All asbestos materials, wastes, shower water, polyethylene, disposable equipment and supplies shall be disposed of as contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York Department of Environmental Conservation and New York City Department of Sanitation.

(H) All asbestos materials shall be prepared for transportation in accordance with this specification and all applicable Federal, State, County and City Regulations. The Contractor shall submit the following documentation:

- (1) Where applicable, an EPA Generator's identification number which has been obtained from the EPA for all asbestos waste generated from the project.
 - (2) Applicable State Waste Hauler license and registration numbers.
 - (3) Federal Hazardous Materials Waste Hauler number.
 - (4) Designated landfill EPA Permit numbers.
- (I) Prior to loading asbestos waste the enclosed cargo areas (dumpster) shall be prepared as follows:
- (1) Clean via HEPA-vacuum and wet wipe techniques the enclosed cargo areas of all visible debris prior to preparing with polyethylene.
 - (2) Line the cargo area with two (2) layers of 6-mil polyethylene sheeting to prevent contamination from damaged or leaking containers. Floor sheeting shall be installed first and extend up the walls a minimum of 24-inches. Wall sheeting shall be overlapped and taped securely into place.
- (J) Asbestos-containing waste shall be placed on level surfaces in the cargo area of the dumpster and shall be packed tightly to prevent any shifting or tipping of the waste during transportation.
- (K) Asbestos-containing waste shall not be thrown into or dropped from the dumpster. All material shall be handled carefully to prevent rupture of the containers.
- (L) All personnel engaged in handling and loading of contaminated waste outside of the work area shall wear protective clothing. The disposable clothing shall include head, body and foot protection and color of clothing shall be different from abatement personnel in the work area. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters.
- (M) The Contractor shall immediately clean debris or residue observed on containers or surfaces outside of the work area. Cleaning shall be via HEPA equipped wet/dry vacuums only.
- (N) All asbestos-containing waste shall be transported from the abatement site to the landfill by a registered Waste Hauler. When transporting ACW:
- (1) Ensure that the ACW has been sufficiently wetted down in a leak tight container.
 - (2) Rewet and repackage any damaged containers.
 - (3) Maintain at storage site an adequate supply of spare leak tight containers.
 - (4) Maintain at storage site an adequate supply of amended water.
 - (5) Keep ACW separate from any other waste.
- (O) Keep ACW in a secured, enclosed, and locked container.
- (P) Waste transport documents shall conform to the requirements of the U.S. Department of Transportation, Hazardous Materials Transportation Regulation, 49 CFR Part 173 and EPA 40 CFR 61.150 (d)(1)(2). Shipping documents shall be clearly marked with the required designation "RQ Asbestos". The Contractor shall provide a copy of this document to the City.
- (Q) A uniform hazardous waste manifest shall be prepared by the Contractor and signed by the Contractor each time the Contractor ships a dumpster load of Asbestos-Containing Waste Material. The uniform hazardous waste manifest shall include the site of waste generation, the names and addresses of the Transporter, the Contractor, and the landfill operator with information on the type and number of asbestos-waste containers, time and date. The Contractor shall provide the Engineer,

Testing Laboratory or authorized designated representative with signed copies of the waste manifest before each departure.

- (R) The Contractor or the Contractor's registered hazardous Waste Hauler shall transport asbestos-containing waste material from the abatement site directly to the specified disposal site. The Contractor or Waste Hauler shall not accept material from any other site when transporting asbestos-containing waste material from the abatement site. The authorized DDC representative or Engineer reserves the right to travel with Contractor's Waste Hauler to the waste disposal site. No intermediate storage of waste material (i.e. Contractors warehouse) shall be permitted.
- (S) Final or progress application for payments will not be processed unless all hazardous waste manifests generated to date have been received and reviewed by the Engineer.
- (T) All asbestos materials, wastes, shower water, polyethylene disposable equipment and supplies shall be disposed of as contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York State Department of Environmental Conservation and the New York Department of Sanitation.
- (U) The Contractor shall transport all sealed drums to a landfill disposal site approved by the Department of Environmental Conservation and the EPA. Transportation shall be performed by a New York State registered Waste Hauler, where required. When presenting the ACW for disposal the Contractor or subcontractor shall:
 - (1) Ensure that waste container is properly labeled according to the National Emission Standard for Hazardous Air Pollutants (NESHAP); Asbestos Revision, 40 CFR, Part 61, Subpart M. The labels shall include the name of the waste generator and the location where the waste was generated.
 - (2) Comply with all applicable orders issued pursuant to asbestos disposal.
 - (3) Ensure that ACW has been sufficiently wetted down.
 - (4) Rewet and repackage any damaged containers.
 - (5) Keep ACW separate from all other wastes.
- (V) The Contractor shall notify the waste disposal site, at least 24-hours prior to transportation of contaminated waste to be delivered. The Contractor shall determine if a larger notification period is required.
- (W) At the site, the Contractor or Waste Hauler trucks shall approach the dump location as close as possible for unloading asbestos waste. Containers shall be carefully placed in the ground. Do not throw containers from truck.
- (X) The Contractor or Waste Hauler shall inspect containers as they are unloaded at the disposal site. Material in damaged containers shall be repacked in empty containers, as necessary.
- (Y) The Contractor or Waste Hauler shall not remove asbestos-containing waste material from drums unless required to do so by the disposal site City. Used drums shall be disposed of as asbestos-contaminated waste.
- (Z) All personnel engaged in unloading of the containers at the waste site shall wear protective clothing. The disposable clothing shall include head, body and foot protection. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters. Workers shall remove their protective clothing at the disposal site, place it in labeled disposal bags and leave them with the deposited waste shipment.

- (AA) For the compaction operation, the Contractor shall ensure that disposal sites personnel have been provided with personal protective equipment by the disposal operator. If the disposal site City has not provided this protective equipment, the Contractor shall supply protective clothing and respiratory protection for the duration of this operation (PAPR respirators are mandatory).
- (BB) If containers are broken or damaged, the Contractor or Waste Hauler shall, using personnel who are properly trained and wearing proper protective equipment, shall repackage the waste in properly labeled containers. The Contractor shall then clean the entire truck and its contents using HEPA-vacuums and wet cleaning techniques until no visible residue is observed.
- (CC) Following the removal of all containerized waste, the Contractor shall decontaminate the truck cargo area using HEPA-vacuums and/or wet cleaning techniques until no residue is observed. All 6-mil polyethylene sheeting shall be removed and discarded as asbestos-containing waste material along with contaminated cleaning material and protective clothing, in containers at the disposal site.
- (DD) The transporter(s) of all asbestos waste shall not back-haul any items on returning from landfill/disposal site.
- (EE) All asbestos waste shall be disposed of in an approved Asbestos Landfill site only.
- (1) NO PERSON UNDER ANY CIRCUMSTANCES SHALL ABANDON A.C.W. The same shall be disposed of only by certified persons in approved landfills.
 - (2) A manifest form will be signed by the Landfill documenting receipt and acceptance of the asbestos-containing waste. This manifest will be furnished to the City of New York.
 - (3) It is the responsibility of the Asbestos Contractor to determine current waste handling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Asbestos Contractor must comply fully with these regulations and all appropriate U.S. Department of Transportation, EPA and other Federal, State and Local entities' regulations and all other current legal requirements.
 - (4) The Asbestos Contractor shall obtain an agreement from the transporter(s) that the practice of "Back-Hauling" will not be engaged in, with respect to any and all waste loads taken from this site during the work.
 - (5) The Asbestos Contractor will document actual disposal of the waste at the designated landfill by having completed a Disposal Certificate and will provide a copy of the same to the Department of Design and Construction.

79.11.6 ACCEPTANCE

79.11.6.1 ACCEPTANCE

- (A) Upon satisfactory completion of all decontamination procedures, a certificate will be issued by the Engineer with copies to all parties.
- (B) A Letter Of Compliance stating that all the work on the project was performed in accordance with the specifications and all applicable Federal, State and Local regulations.
- (C) All warranties as stated in the specifications.

79.11.7 MEASUREMENT AND PAYMENT

All costs associated with the work required by this specification for the removal and disposal of ACM and asbestos-contaminated duct insulation from existing Transit Authority duct that are exposed, the replacement of the removed ACM insulation with a Transit Authority approved non-asbestos containing

materials insulation, and the support and protection of the existing Transit Authority duct that are exposed and to remain in service at all times as required by these contract documents will be paid on a Time and Material basis in accordance with **Articles 25 and 26** of the Contract except as amended herein. Payment will be made under the item labeled "ALLOWANCE FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING TRANSIT AUTHORITY DUCT INSULATION (REMOVAL OF ACM, REPLACEMENT WITH NON-ACM, AND SUPPORT AND PROTECTION OF EXISTING TRANSIT AUTHORITY DUCT, COMPLETE)". This item shall be used exclusively for the costs associated with the removal and disposal of ACM and asbestos-contaminated duct insulation from existing Transit Authority duct that are exposed, the replacement of the removed ACM insulation with a Transit Authority approved non-asbestos containing materials insulation, and the support and protection of the existing Transit Authority duct that are exposed and to remain in service at all times as required by these contract documents.

No guarantee is given that this allowance for additional costs associated with the work required for the removal and disposal of ACM and asbestos-contaminated duct insulation from existing Transit Authority duct that are exposed, the replacement of the removed ACM insulation with a Transit Authority approved non-asbestos containing materials insulation, and the support and protection of the existing Transit Authority duct that are exposed and to remain in service at all times as required by these contract documents will in fact be required in this contract. The estimated price in the Bid Schedule is included in the total bid solely to insure a method of payment for performing this work as directed by the Engineer.

Payment made under this item shall be equal to the sum total of all vouchers submitted by the Contractor as payment for the cost of performing this work as approved by the Engineer. Payment under this item, including partial payments, will not be made until the Contractor has furnished satisfactory evidence to the Engineer that the Contractor has performed the work.

The voucher for the payment shall be submitted to the Engineer on a monthly basis.

The "fixed sum" in the Bid Schedule is for bidding purposes only and shall not be varied in the bid; however, the Contractor will be paid only for the actual work performed regardless of the fixed sum, which may be more or less than the amount fixed in the Bid Schedule.

Payment for Allowance For Asbestos Abatement Work Performed On Existing Transit Authority Duct Insulation (Removal Of ACM, Replacement With Non-ACM, And Support And Protection Of Existing Transit Authority Duct, Complete) will be made under the Item Number as calculated below:

The Item Number for Allowance For Asbestos Abatement Work Performed On Existing Transit Authority Duct Insulation (Removal Of ACM, Replacement With Non-ACM, And Support And Protection Of Existing Transit Authority Duct, Complete) has seven characters. (The decimal point is considered a character, the third character.)

(1) The first five characters shall define Allowance For Asbestos Abatement Work Performed On Existing Transit Authority Duct Insulation (Removal Of ACM, Replacement With Non-ACM, And Support And Protection Of Existing Transit Authority Duct, Complete):

79.11

(2) The sixth, seventh, eighth and ninth characters shall define Allowance For Asbestos Abatement Work Performed On Existing Transit Authority Duct Insulation (Removal Of ACM, Replacement With Non-ACM, And Support And Protection Of Existing Transit Authority Duct, Complete):

AATA - Allowance For Asbestos Abatement Work Performed
On Existing Transit Authority Duct Insulation (Removal
Of ACM, Replacement With Non-ACM, And Support
And Protection Of Existing Transit Authority Duct,
Complete)

(3) The Item Number together with Description and Pay Unit as provided in the Bid Schedule is provided below:

Item No.	Description	Pay Unit
79.11AATA	ALLOWANCE FOR ASBESTOS ABATEMENT WORK PERFORMED ON EXISTING TRANSIT AUTHORITY DUCT INSULATION (REMOVAL OF ACM, REPLACEMENT WITH NON-ACM, AND SUPPORT AND PROTECTION OF EXISTING TRANSIT AUTHORITY DUCT, COMPLETE)	F.S.

APPENDIX
NYCDEP ATTACHMENTS

NYC DEP Asbestos Control Program

VAR # _____

ATTACHMENT TM
REQUIREMENTS FOR MODIFIED TENT PROCEDURES (FOR GROSS ABATEMENT)
APPLIES TO VARIANCES FROM TITLE 15, CHAPTER 1, RULES OF THE CITY OF NEW YORK,
SECTIONS 1-81(m) AND 1-91(c) {15 RCNY § 1-81(m) AND § 1-91(c)}

1. All tent enclosures and contiguous spaces within a radius of 10 feet shall be roped off and regulated to allow only certified workers and authorized visitors to enter.
2. 15 RCNY § 1-106 shall be complied with except that
 - I. all tents shall be lined with 2 layers of plastic sheeting (6-mil thickness at a minimum);
 - ii. the amounts of ACM that may be abated in each modified tent shall **NOT EXCEED** (a) 160 square feet and/or (b) 260 linear feet.
 - iii. the total amount of ACM that may be abated at any one time in several modified tents shall **NOT EXCEED** 1,000 combined square feet plus linear feet.
3. All modified tents shall be fully framed (including horizontally across the top, if applicable) with 2x3 (minimum) wood or metal studs spaced not more than 36 inch center-to-center vertically around all sides (except at the entry/exit which shall not exceed 36 inch width); and
4. A minimum of one air volume change per 15 minutes through each modified tent shall be maintained.
5. An airlock having at least 3 feet length between the two curtained doorways shall be constructed at the entrance to each and every tent if the decontamination unit is not attached to the tents, and
6. If a decontamination unit is not attached to each tent, located within each airlock there shall be extra clean and uncontaminated disposable protective suits (e.g. Tyveks), and one such clean suit shall be worn by each worker in the airlock, immediately after removal of the outer suit as per 15 RCNY § 1-106(k), before each worker exits any airlock.
7. Any decontamination unit that is not attached to a tent (i.e. that is remote from a tent) shall be constructed in compliance with the requirements of Attachment D and must be located on the same floor as the modified tents.
8. Decontamination units that are attached to tents shall comprise at least a shower room and a clean room, with one curtained doorway separating them, and with a second curtained doorway separating the tent from the shower room.
9. After the ACM removal and bagging [refer 15 RCNY § 1-106(f) and (g)], the bagged waste shall be HEPA-vacuumed then wet cleaned and transferred into the airlock or into the shower room (as per Items 5 and 8 above respectively) for double bagging, and thereafter the double-bagged waste shall be transferred outside the airlock or outside the clean room for its final transfer to storage in a holding area and/or to legal means of disposal.
10. If the integrity of the tent is compromised and/or visible emissions are detected outside the tent and/or levels exceed 0.01 f/cc work shall stop and 15 RCNY § 1-45(a) shall be complied with immediately. Post-abatement clearance air samples shall be required in the areas outside the tent.
11. A minimum of 3 during area air samples and 3 post abatement clearance air samples must be taken in compliance with section 1-41 of the NYC DEP Asbestos Regulation for each modified tent.

NOTE: This attachment may be revised at any time by the Department.

TRU/JM 04/2005

NYC DEP ASBESTOS CONTROL PROGRAM

VAR# _____

**ATTACHMENT D
REMOTE WORKER DECONTAMINATION UNIT**

**APPLIES TO VARIANCE FROM TITLE 15, CHAPTER 1, RULES OF THE CITY OF
NEW YORK SECTIONS 1-82(a) AND 1-83(a)* {15 RCNY § 1-82(a) AND § 1-83(a)*}.**

1. The remote worker decontamination unit shall be constructed outside the work area, in accordance with 15 RCNY § 1-82, and attached to individual glovebag work areas (or tents) or common space leading to individual work areas.
2. The remote worker decontamination unit shall consist of, at least, a shower room, and a clean room separated from each other by an airlock and from the glovebag work area.
3. In addition to the shower heads, the shower room shall be provided with a flexible hose for equipment and waste decontamination.
4. The remote holding area for the asbestos containing waste shall comply with Title 16, Chapter 8, Rules of the City of New York (16RCNY 8 ET SEQ.)
5. The decontamination unit shall be maintained in accordance with 15 RCNY § 1-94 (except sub-section b).
6. All asbestos handlers shall wear two disposable suits, including gloves, hood and footwear, and appropriate respiratory equipment, after removing street clothes in the clean room, and must exit from the shower room.
7. Each worker, before leaving the glovebag work area (or tent), shall clean the outside of the respirators and outer protecting clothing by wet cleaning and/or HEPA vacuuming. The outer disposable suit shall be removed in the work area and the workers shall then proceed to the shower room. The inner disposable suit and respirator shall be washed thoroughly before removing and prior to aggressive shower.
8. After the ACM removal and bagging {refer 15 RCNY § 1-105(c)15}, the bagged waste shall be HEPA-vacuumed and then transferred to the shower room for wet cleaning and double bagging, prior to storage and disposal.
9. Worker and waste decontamination cannot take place at the same time and decontamination system shall be in place for the entire duration of the abatement activities.
10. The following additional conditions must be complied with in order to re-use an attached decontamination enclosure system(s) as a remote decontamination unit.
 - i) Final air clearance must be achieved in the full containment area to which the decontamination enclosure system(s) is attached.
 - ii) The decontamination enclosure system(s) shall be re-plasticized in accordance with 15 RCNY § 1-82.

*Required for projects disturbing 1,000 or more linear feet.

NOTE: This attachment may be revised at any time by the Department.

TRU/JM 4/2005

ATTACHMENT
ASBESTOS CONTAINING DUCT INSULATION REMOVAL PROCEDURE

The work procedure to be utilized for the removal of asbestos containing duct insulation shall be as follows:

I. Personal Protective Equipment

Prior to beginning work, all workers performing the removal of the duct insulation must equip themselves with the proper personal protective equipment (PPE). The PPE required for the removal of duct insulation includes:

- (1) Tyvek suit with boot protection ("booties").
- (2) Disposable gloves (latex or nitrile).
- (3) Eye protection.
- (4) Half face respirator with HEPA cartridges.

In addition to the PPE listed above, the tools and materials which will be required for this operation shall include the following:

- (1) Amended water solution.
- (2) 6-mil plastic sheeting.
- (3) 6-mil plastic asbestos disposal bags.
- (4) Disposable rags or wipes.
- (5) Duct tape.
- (6) Hand tools (chipping hammer, chisel, scraper, putty knife).
- (7) Abrasive pads.
- (8) Asbestos barrier tape.

NOTE: No power tools, grinders, sanders, or burning apparatus can be used to remove duct insulation.

II. Work Procedure

(A) Removal:

The following work procedure shall be employed when removing duct insulation:

- (1) Set up the asbestos barrier tape around the perimeter of the excavation.
- (2) Place 6-mil plastic sheeting under the duct to collect loose debris.
- (3) Wet down duct insulation with amended water.
- (4) Use hand tools to break away the large chunks of duct insulation. Place the removed insulation in a plastic asbestos disposal bag.
- (5) Remove the amount of insulation around the required area of the duct necessary to perform the work associated with the installation of the trunk water main - the Engineer shall provide all markouts and make the final determination on quantities requiring removal.
- (6) Ensure that the intact duct insulation on the duct is not damaged when performing the removal of materials from the excavation.
- (7) For sections of duct left in the ground, seal all ends of exposed insulation with duct tape. Plastic insulation and duct tape on all coated duct will be removed from the site.
- (8) In the event that some insulation material did not fall onto the plastic sheeting, collect these pieces and place them on the sheeting.
- (9) Once duct insulation removal is completed and the exposed ends are sealed, fold the plastic sheeting onto itself and place it in a properly labeled asbestos bag.
- (10) Wet wipe all equipment with amended water and rags before removal from work area. Place used rags and old work gloves in asbestos disposal bags.
- (11) Ensure that bagged ACM is wet prior to transportation.

- (12) ACM shall be properly labeled in accordance with OSHA Regulations 29 CFR 1926.58K(2), and shall be kept wet until disposal in compliance with Title 15, Chapter 1, Rules of the City of New York (15RCNY 1).

(B) Disposal:

The following work procedure shall be employed when disposing Duct Insulation:

- (1) Double bag all waste materials. The inside and outside bags must have an asbestos label with the work location identified.
- (2) Complete an asbestos waste tracking form and attach it to the bag.
- (3) Place double bagged waste in a truck and transport it to an approved New York State asbestos landfill.
- (4) All ACM waste bags must be picked up and disposed of on a daily basis at the end of each shift.

END OF ADDENDUM NO.5

This Addendum consists of forty-six (46) pages.

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

DECEMBER 12, 2012

ADDENDUM NO. 6

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

**PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET**

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

TOGETHER WITH ALL WORK INCIDENTAL THERETO

**BOROUGH OF MANHATTAN
CITY OF NEW YORK**

**SPECIFICATIONS FOR
HANDLING, TRANSPORTATION AND DISPOSAL
OF NONHAZARDOUS AND POTENTIALLY HAZARDOUS
CONTAMINATED MATERIALS**

This Addendum is issued for the purpose of amending the requirements of the Contract Documents and hereby made part of said Contract Documents to the same extent as if it was originally included herein.

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ITEM 8.01 C1	<u>HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOILS</u>	A6-1
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Attachments

1. New York City Department of Environmental Protection Limitations for Effluent to Storm-Sanitary or Combined Sewers Parameters
2. Applicable Regulations
3. Definitions

ITEM 8.01 C1 HANDLING, TRANSPORTING AND DISPOSAL OF NON-HAZARDOUS CONTAMINATED SOILS

8.01 C1.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of non-hazardous contaminated soils. The materials covered by this specification are soils that are contaminated with petroleum or chemical products but cannot be classified as hazardous waste. For the purpose of this specification, soil shall be defined as any material excavated below the pavement and base for pavement.

Non-hazardous contaminated soils are defined as soils exhibiting one or more of the following characteristics:

- ◆ Elevated Photo-Ionization Detector (PID) readings, subsequently confirmed by lab analysis
- ◆ Visual evidence of contamination
- ◆ Petroleum and/or chemical odors

Non-hazardous contaminated soils must be stockpiled at an off-site approved location or secured on-site by the Contractor, meeting all required Federal, State and Local stipulations. Sampling and laboratory analysis must be conducted to determine if the soils are hazardous, unless the alternative procedure as defined under subsection 8.01 C1.1 A.5 has been agreed upon by treatment facilities. Contaminated soils determined to be non-hazardous shall be handled in accordance with the specifications herein for Item 8.01 C1. Contaminated soils determined to be hazardous shall be handled in accordance with the specifications for Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils.

The Contractor shall retain the services of an independent Environmental Consultant, as specified under Item 8.01 S – Health and Safety, to oversee the work required under this Item.

Non-hazardous soils shall be delivered to the disposal or treatment facility within thirty (30) calendar days after excavation.

The Contractor shall conduct sampling and analysis of the impacted soils as specified under Item 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soils for Disposal Parameters. The laboratory results shall be forwarded to DDC Program Administration, Engineering Support Services (ESS) for review to determine if the soils will be handled and disposed of as contaminated regulated soils or hazardous waste. No other soils shall be sampled or tested without the DDC's approval or direction.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of non-hazardous contaminated soils are in compliance with all applicable Federal, State, and City statutes and regulations.

The Contractor shall document the excavation, handling, transportation and disposal of non-hazardous contaminated soils. The Contractor shall supply all equipment, material and labor required to conduct the specified work of this Item.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Material Handling Plan (MHP). The MHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

1. The Contractor's procedures for identifying non-hazardous contaminated soils during excavation, including the specific model and manufacturer of intended organic vapor

- monitoring equipment and calibration procedures to be used. It should also include the training and experience of the personnel who will operate the equipment.
2. The Contractor's procedures for safely handling non-hazardous contaminated soils. The procedures must include personnel safety and health as well as environmental protection considerations.
 3. Name, address, New York State Department of Health's (DOH) Environmental Laboratories Accreditation Program (ELAP) status and telephone number of the proposed laboratory for analysis of representative soil samples. The ELAP for the intended analysis must approve the laboratory.
 4. Identification of the Contractor's proposed waste transporter(s). This information shall include:
 - a. Name and Waste Transporter Permit Number
 - b. Address
 - c. Name of responsible contact for the hauler
 - d. Telephone number for the contact
 - e. Any and all necessary permit authorizations for each type of waste transported
 - f. Previous experience in performing the type of work specified herein
 5. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures may include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility.
 6. A backup facility should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.
 7. Identification of the Contractor's two proposed Treatment Storage or Disposal (TSD) facilities for non-hazardous contaminated soils (primary and back-up) for final disposal of the soils. The primary TSD shall be an approved soil recycling/treatment facility. The backup facility may be a recycling/treatment facility or a New York State Department of Environmental Conservation (DEC) approved lined landfill or other facility approved by DEC to accept this material. The information required for each facility shall include:
 - a. Facility name and the State identification number
 - (1) Facility location
 - (2) Name of responsible contact for the facility
 - (3) Telephone number for contact
 - (4) Signed letter of agreement to accept waste as specified in this contract
 - (5) Unit of measure utilized at facility for costing purposes
 - b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility.

- c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued.
 - d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - e. The Contractor shall provide the date of the proposed facility's last compliance inspection.
 - f. A list of all active (unresolved) compliance orders (or agreements), enforcement notices, or notices of violations issued to the proposed facility shall be provided. The source and nature of the cause of violation shall be stated, if known.
8. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

8.01 C1.2 MATERIALS

- A. Containers shall be as required in the United State Department of Transportation (DOT) regulations.
- B. Polyethylene to be placed under (20 mil. thickness minimum) and over (10 mil. thickness minimum) soil piles.
- C. The Contractor shall assure that the waste hauler's appropriate choice of vehicles and operating practices shall prevent spillage or leakage of contaminated material from occurring en route.
- D. The Contractor shall provide, install and maintain any temporary loading facilities on site as required until completion of material handling activities. The location and design of any facilities shall be included in the MHP and be approved by the Program Administration, ESS.

8.01 C1.3 CONSTRUCTION DETAILS

A. Material Handling

- 1. Immediately after excavation of non-hazardous contaminated soil the Contractor shall:
 - a. Load material directly onto trucks/tankers/roll offs for disposal off site; or
 - b. If interim stockpiling is required, place on a minimum of 20 mil. or equivalent plastic ground cloth and cover by minimum of 10 mil. polyethylene sheeting or equivalent to protect against leaching or runoff of contaminants into groundwater or stormwater. Weight or secure the sheeting by appropriate means and seal seams as approved by the DDC to prevent tearing or removal by weather. Grade surrounding surface to provide for positive drainage away from pile. Stockpile shall not exceed 100 cubic yards.
- 2. Institute appropriate procedures and security measures to ensure the protection of site personnel and the public from contaminated materials as described in the approved MHP and Item 8.01 S - Health and Safety.
- 3. Any soil encountered that appears to contain unknown contaminants (based on visual, odor, or other observation), or that vary substantially from the material originally

identified must be segregated in stockpiles and the independent Environmental Consultant promptly notified. Construct stockpiles to the same requirements as stated in subsection A.1.b above.

4. Provide any dewatering that is necessary to complete the work. Contaminated water shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
5. Provide and operate field organic vapor test equipment, a PID or a flame ionization detector (FID), to detect general organic vapor levels at intervals of approximately fifty (50) cubic yards of soil excavated, when visual or odor observations indicate the material may substantially differ from the soil previously excavated and/or as directed by the independent Environmental Consultant.

B. Off-Site Transportation to Disposal or Treatment Facility

1. General

- a. The Contractor shall furnish all labor, equipment, supplies and incidental costs required to transport contaminated material from the work area to the off-site disposal or treatment facility, and any other items and services required for transporting contaminated material for disposal at an off-site facility.
- b. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and en-route to the off-site scale. The Contractor shall be responsible for tracking all material/vehicles from the site to the off-site scale.
- c. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.
- d. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule.
- e. The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated soils adhering to the wheels or undercarriage are removed prior to the vehicle leaving the site.
- f. The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed necessary.
- g. **The Program Administration, ESS shall review and approve waste profiles before transportation to the TSD facility.**

2. Hauling

- a. The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the disposal or treatment facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.

- b. The Contractor shall be held responsible, at its own cost for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.
- c. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to and between acceptances of loads.
- d. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.
- e. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Any use of substitute or additional transporters must have previous written approval from the Program Administration, ESS at no additional cost to the City.
- f. The Contractor shall develop, document, and implement a policy for accident prevention.
- g. The Contractor shall not combine contaminated materials from other projects with material from this project.
- h. No material shall be transported until approved by the DDC.

3. Off-Site Disposal

- a. The Contractor shall use only the facility(ies) identified in the MPH for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from the Program Administration, ESS, and if approved shall be at no extra cost to the City.
- b. The Contractor shall be responsible for acceptance of the materials at an approved facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated treatment and/or disposal services.
- c. The DDC reserves the right to contact and visit the disposal or treatment facility and regulatory agencies to verify the agreement to accept the stated materials and to verify any other information provided.
- d. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done at no extra cost or delay to the City.
- e. The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.

4. Equipment and Vehicle Decontamination

- a. The Contractor shall design and construct a portable decontamination station to be

used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work will be paid under Item 8.01 S - Health and Safety.

- b. Water generated during the decontamination process shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

8.01 C1.4 METHOD OF MEASUREMENT

Quantities for non-hazardous contaminated soils shall be measured in tons. The tonnage will be determined by off-site truck scales, as per Subsection 8.01 C1.3.B1, that are capable of generating load tickets.

8.01 C1.5 PRICE TO COVER

- A. The unit bid price bid per ton for Item 8.01 C1 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for excavation, handling, transportation, disposal, documentation, fees, permits, loading, stockpiling, hauling, and any other incidentals necessary to complete all the work as specified herein for handling, transporting, and disposal of non-hazardous contaminated soil.
- B. Final disposal of hazardous soil shall be paid for under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. Disposal of decontamination water shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- C. Backfill will be paid for under its respective item as specified in the contract document.
- D. The independent Environmental Consultant shall be paid under Item 8.01 S – Health and Safety.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 C1	Handling, Transporting, and Disposal of Non-Hazardous Contaminated Soil	Tons

ITEM 8.01 C2 SAMPLING AND TESTING OF CONTAMINATED/ POTENTIALLY HAZARDOUS SOIL FOR DISPOSAL PARAMETERS

8.01 C2.1 WORK TO INCLUDE

A. Description

The work shall consist of collecting and analyzing representative soil samples for parameters typically requested by the disposal facilities.

B. Sampling and Laboratory Analysis

1. At least thirty (30) days prior to the commencement of work, the Contractor's independent Environmental Consultant must submit a Soil Sampling Plan/Field Sampling Plan (SSP/FSP) to the Program Administration, Engineering Support Services (ESS) for review and approval. The plan shall include the name, address, DOH's ELAP status, and telephone numbers of the proposed laboratory. The plan shall also include training and experience of the personnel who will collect the samples.
2. The Contractor shall sample and analyze representative samples of the contaminated/potentially hazardous soils. For stockpiled soils, the Contractor shall collect and analyze one (1) composite sample per 100 cubic yards or fraction thereof. Each composite sample shall consist of a minimum of five (5) grab samples collected from greater than two (2) feet below the soil surface. For drummed soil, the Contractor shall collect one (1) composite sample per (ten) 10 drums or fraction thereof. Each composite sample shall consist of a grab sample from each of the ten (10) drums or fraction thereof. Each composite sample shall be analyzed for Resource Conservation and Recovery Act (RCRA) hazardous waste characteristics (Ignitability, Reactivity, Corrosivity), Full Toxicity Characteristic Leaching Procedure (TCLP) (including RCRA metals, volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), pesticides, herbicides), Total Petroleum Hydrocarbons (TPH) and Polychlorinated Biphenyls (PCBs). All samples collected should be analyzed on a rush four (4) calendar days turn around time and analytical results must be submitted to Program Administration, ESS within five (5) calendar days after sample collection.
3. All sampling shall be conducted by a person trained in sampling protocols using standard accepted practices for obtaining representative samples.
4. The Contractor must also contact the disposal facility where the waste will be sent for permanent disposal, and arrange to collect any additional samples required by the facility. The cost associated with additional sampling and testing shall be included in the bid price of this Item.
5. The quality of the data from the sampling program is the Contractor's responsibility. The Contractor must furnish all qualified personnel, equipment and instruments necessary to carry out the sampling. Unless directed otherwise, all sampling procedures must follow the DEC sampling guidelines and protocols.
6. All sample containers shall be marked and identified with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized and other information that may be useful in determining the character of the sample. Chain-of-custody shall be tracked from laboratory issuance of sample containers through laboratory receipt of the samples.

7. The Contractor shall maintain a bound sample logbook. The Contractor shall provide DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum shall be recorded to the log:
 1. Sample identification number
 2. Sample location
 3. Field observation
 4. Sample type
 5. Analyses
 6. Date/time of collection
 7. Collector's name
 8. Sample procedures and equipment utilized
 9. Date sent to laboratory and name of laboratory
8. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described in subsection B2, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described in subsection B2, as determined by industry laboratory pricing standards.
9. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the sampling location, and must be properly disposed after use.
10. Soils exceeding any of the hazardous characteristic criteria meet the legal definition of hazardous soils (rather than non-hazardous contaminated soils) and shall be transported or disposed of under Item 8.01 H – Handling, Transporting and Disposal of Hazardous Soils. All analyses must be done by a laboratory that has received approval from the ELAP for the methods to be used. The Contractor must specify the laboratory in the MHP.

8.01 C2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested. A set shall be defined as one (1) composite sample analyzed for the full range of parameters as specified in subsection B2.

8.01 C2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 C2 shall include the cost of furnishing all labor materials, plant, equipment, and insurance necessary for sampling, handling, transporting, testing, documentation, fees, permits and any other incidentals necessary to complete the work as specified herein for sampling and testing of contaminated/potentially hazardous soil.

Payment will be made under:

ITEM NUMBER	ITEM	PAYMENT UNIT
8.01 C2	Sampling and Testing of Contaminated/ Potentially Hazardous Soil for Disposal Parameters	Set

ITEM 8.01 H HANDLING, TRANSPORTING, AND DISPOSAL OF HAZARDOUS SOILS

8.01 H.1 WORK TO INCLUDE

General: This work shall consist of the handling, transportation and disposal of soils or materials that are listed as hazardous wastes or exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261. For the purpose of this specification, soils shall be defined as any materials excavated below the pavement and base for pavement.

Contaminated soils determined to be hazardous under Item 8.01 C2 shall be handled, transported, and disposed of under Item 8.01 H in accordance with the specifications herein.

The independent Environmental Consultant retained by the Contractor, as specified under Item 8.01 S – Health and Safety, shall conduct sampling and analysis of above soils to determine which soils are hazardous.

All work under Item 8.01 H shall be performed under the direct supervision of the Contractor's Environmental Consultant, as approved by the Program Administration, Engineering Support Services (ESS).

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation, and disposal of hazardous materials are in compliance with the applicable Federal, State, and Local statutes and regulations.

The Contractor shall document the excavation, handling, sampling, and testing, transportation and disposal of hazardous soils. The City shall be listed in the disposal documents as the waste generator.

The Contractor shall supply all equipment, material and labor required to conduct the specified work of this section.

The Contractor shall ensure that all operations associated with the handling, sampling, loading, transportation and disposal of hazardous soils are conducted in a manner to protect site personnel, the public and the environment, in accordance with all applicable Federal, State, and Local laws and regulations.

The Contractor shall decontaminate all equipment prior to its removal from the exclusion zone and/or following contact with hazardous materials, as detailed in Item 8.01 S - Health and Safety. Water generated during the decontamination process shall be disposed of under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

A. Material Handling Plan: Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Material Handling Plan (MHP). The MHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The MHP shall, at a minimum, consist of:

1. The Contractor's procedures for identifying contaminated/potentially hazardous soils during excavation, including instrumentation and calibration procedures to be used.
2. The Contractor's procedures for safely handling hazardous soils or soils which have not yet been tested but are believed to be potentially hazardous.
3. Identification of the Contractor's proposed waste transporter(s). This information shall include:
 - a. Name and waste transporter permit number

- b. Address
 - c. Name of responsible contact for the hauler
 - d. Telephone number for the contact
 - e. Any and all necessary permit authorizations for each type of waste transported
 - f. Previous experience in performing the type of work specified herein
4. All staging/stockpiling areas (if stockpiling areas are intended and available), or alternate procedures that will be used. Alternate procedures could include, but are not limited to, agreements from the intended disposal or treatment facilities to accept boring data and/or analytical data previously obtained during the site characterization so that materials may be directly loaded into vehicles for shipment to the disposal facility or the use of off-site stockpiling locations approved by the DEC.
 5. A backup facility, should the staging/stockpile areas become unavailable, insufficient in area or not be present by some other unforeseen difficulty.
 6. Identification of the Contractor's two proposed United State Environmental Protection Agency (EPA) or DEC approved RCRA TSD facilities for hazardous soils.
 7. The Contractor shall submit the following information prior to any transportation of soils regarding the temporary and final off-site TSD or facilities where it is proposing to take hazardous soils. The expense of furnishing all information will be included in the Contractor's bid price:
 - a. General Information
 - (1) Facility name and the EPA identification number
 - (2) Facility location
 - (3) Name of responsible contact for the facility
 - (4) Telephone number for contact
 - (5) Signed letter of agreement to accept waste as specified in this contract
 - (6) Signed letter of agreement with a TSD for disposal of waste that may not be land-disposed
 - (7) Unit of measure utilized at each facility for costing purposes
 - b. A listing of all permits, licenses, letters of approval, and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of wastes derived from this Contract.
 - c. A listing of all permits, licenses, letters of approval, and other authorizations to operate which have been applied for by the proposed facility.
 - d. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - e. The Contractor shall provide the date of the proposed facility(ies) last compliance inspection under RCRA.

- f. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be approved. The source and nature of the cause of violation shall be stated, if known.
- 8. Description of all sampling and analyses that will be needed to obtain disposal facility approval.

8.01 H.2 MATERIALS

- A. Containers shall be watertight as required in the DOT regulations and must meet all applicable regulations including but not limited to those in Attachment 2.
- B. Polyethylene (20 mil. thickness minimum) to be placed under and (10 mil. thickness minimum) over soil piles. If soils are placed in drums, polyethylene must be placed over the drums.

8.01 H.1.3 CONSTRUCTION DETAILS

A. Material Handling

- 1. The Contractor shall institute procedures to protect site personnel and the public from the non-hazardous and hazardous materials as described in Section 8.01 S - Health and Safety.
- 2. The Contractor shall handle hazardous soil as approved in the MHP.
- 3. Stockpiled materials at the temporary TSD facility shall be handled according to the facility requirements but at a minimum: shall be drummed or placed on and covered with polyethylene to protect against erosion and leaching into surrounding soils, the stockpile area shall be graded for positive drainage away from the pile, and shall be labeled while being held for sampling prior to permanent disposal.
- 4. Provide any dewatering that is necessary to complete the work. Water shall be disposed of in accordance with Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.

B. Off-Site Transportation and Disposal

- 1. The Contractor shall furnish all labor, equipment and supplies required to transport hazardous materials from the work area to the off-site TSD facility(ies) and to acquire any other items and services required for transporting hazardous materials for storage and/or disposal at an approved off-site facility.
- 2. Weight Measurement
 - a. The Contractor shall submit the name and location of the facility where an off-site scale is located. The Contractor shall also submit a plan to the DDC for review outlining procedures on controlling trucks leaving the work site and on-route to the off-site scale. The Contractor shall be responsible for tracking all materials/vehicles from the site to the off-site scale.
 - b. The Contractor shall provide to the DDC certified tare and gross weight slips for each load received at the accepted facility which shall be attached to each returned manifest.

3. General

- a. Manifests: The Contractor shall organize and maintain the material shipment records/manifests required by law.
- b. The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.
- c. The Contractor shall inspect all vehicles leaving the project site to ensure that hazardous soils adhering to the wheels or under carriage are removed prior to the vehicle leaving the site.
- d. The Contractor shall obtain letters of commitment from the waste haulers and the TSD facility to haul and accept shipments. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.

4. Hauling

- a. The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.
- b. The Contractor shall coordinate manifesting, placarding, of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the TSD facility. If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and to be resolved by the Contractor to the satisfaction of the DDC.
- c. The Contractor shall be held responsible, at its own expense, for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site.
- d. The Contractor shall ensure that trucks are protected against contamination by properly covering and lining them with compatible material (such as polyethylene) or by decontaminating them prior to any use other than hauling hazardous materials.
- e. The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance, and weight restrictions.
- f. The Contractor shall only use the transporter(s) identified in the MHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from the DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.
- g. The Contractor shall develop, document, and implement a policy for accident prevention.
- h. The Contractor shall not combine hazardous materials from other projects with material from this project.
- i. **The Contractor shall obtain for the City an EPA hazardous waste generator identification number and a representative of Program Administration, ESS will review and sign the manifest as the generator.**

- j. No materials shall be transported until approved by the DDC.
5. Off-Site Disposal
 - a. The Contractor shall be responsible for acceptance of the materials at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated materials, and that the facility provides the stated storage and/or disposal services.
 - b. In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility(ies), and the alternate facility(ies) must be approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.
 - c. The Contractor shall submit all results and weights to the DDC.
 - d. **The Contractor is responsible to pay all fees associated with the generation and disposal of all excavated hazardous waste. These fees include, but are not limited to, the New York State Department of Finance and Taxation (DFT) quarterly fees for hazardous waste and the New York State DEC annual hazardous waste regulatory fee program. The Contractor shall submit a copy of proof of payment to the DDC and Program Administration, ESS.**
6. Equipment and Vehicle Decontamination

The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting from the exclusion zone. The cost for this work shall be paid under Item 8.01 S - Health and Safety. Disposal of decontamination liquids is described under Item 8.01 W1 - Removal, Treatment and Discharge/Disposal of Contaminated Water.
7. Record Keeping

The Contractor shall obtain manifest forms, and complete the shipment manifest records required by the appropriate regulatory agencies for verifying the material and quantity of each load in unit of volume and weight. Copies of each manifest shall be submitted to the DDC within four (4) business days following shipment, and within three (3) business days after notification of receipt of the facility. Any manifest discrepancies shall be reported immediately to the DDC and be resolved by the Contractor to the satisfaction of the DDC.

8.01 H.4 METHOD MEASUREMENT

Quantities for hazardous soil shall be measured in tons satisfactorily delivered to the treatment, storage or disposal facility. The tonnage will be determined by off-site truck scales, as per subsection 8.01 H1.3.B.2, that are capable of generating load tickets.

8.01 H.5 PRICE TO COVER

- A. The unit price bid per ton for Item 8.01 H shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for excavation, handling, transportation, disposal, documentation, permits, fees, taxes, stockpiling, hauling, and any other incidentals necessary to

complete the work as specified herein for handling, transporting and disposal of hazardous soils.

- B. Final disposal of non-hazardous materials shall be paid for under Item 8.01 C1 – Handling, Transporting and Disposal of Non-Hazardous Soils. Disposal of decontamination water shall be paid under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- C The independent Environmental Consultant shall be paid under Item 8.01 S – Health and Safety.
- D. Backfill will be paid for under its respective item.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 H	Handling, Transporting, and Disposal of Hazardous Soils	Tons

ITEM 8.01 S HEALTH AND SAFETY

8.01 S.1 WORK TO INCLUDE

Health and Safety Requirements

A. Scope of Work

It is the Contractor's responsibility to stage and conduct his work in a safe manner. The Contractor shall implement a Health and Safety Plan (HASP) for contaminated/hazardous soil intrusive activities as set forth in Occupational Safety and Health Administration (OSHA) Standards 1910.120 and 1926.650-652. The Contractor shall ensure that all workers have at a minimum hazard awareness training. The Contractor shall segregate contaminated work area in secured exclusion zones. These zones shall limit access to Contractor personnel specifically trained to enter the work area. The exclusion zone shall be set up to secure the area from the public and untrained personnel. The project health and safety program shall apply to all construction personnel including persons entering the work area. In addition, the Contractor shall protect the public from on-site hazards, including subsurface contaminants associated with on-site activities. The HASP shall be signed off by a Certified Industrial Hygienist and reviewed by Program Administration, Engineering Support Services (ESS).

Work shall include, but not be limited to:

1. Implementation of a baseline medical program.
2. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and providing all other health and safety measures.
3. Providing, installing, operating and maintaining on-site emergency medical first aid equipment as specified in this section for which payment is not provided under other pay items in this Contract.
4. Providing, installing, operating, maintaining and decommissioning all equipment and personnel decontamination facilities specified within this section, including, but not limited to, the decontamination pad, decontamination water supply, decontamination water collection equipment and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract.
5. Provide the minimum health and safety requirements for excavation activities within the limits of this Contract.
6. Implement and enforce a HASP: The HASP as presented in these specifications is dynamic with provisions for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The HASP will also address measures for community protection, accident prevention, personnel protection, emergency response/contingency planning, air monitoring, odor control and hazardous chemicals expected on site. Providing a Confined Space Entry Program as defined in the Occupational Safety and Health Act, Confined Space Entry Standard, 29 CFR 1910.146.

B. Environmental Consulting Services

The Contractor shall retain an independent Environmental Consultant to obtain all permits and perform all field screening, air monitoring, community air monitoring, soil sampling, and health and safety services. The independent Environmental Consultant shall at a minimum provide documentation to the Program Administration, ESS demonstrating the minimum requirements as set forth below:

1. The independent Environmental Consultant project supervisor on site and other designated key personnel shall have a minimum of three (3) years experience in the environmental field dealing with issues associated with contaminated soils. Such experience shall include oversight on environmental, specifically volatile organic compound and dust monitoring services as a routine part of its daily operations.
2. The independent Environmental Consultant must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The independent Environmental Consultant shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated materials shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the independent Environmental Consultant shall provide site specific training.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

C. Submittals

1. The Contractor shall submit, within forty-five (45) calendar days after the contract award, a written HASP as specified herein, to Program Administration, ESS for review and comment. The Contractor shall make all necessary revisions required by Program Administration, ESS and resubmit the HASP to the Program Administration, ESS for acceptance. Start-up work for the project will not be permitted until written acceptance has been issued by the Program Administration, ESS.
2. Daily safety logs shall be maintained by the Contractor and shall be submitted to the DDC either on request or on completion of the work. Training logs shall be maintained by the Contractor and submitted to the DDC either on request or on completion of the work. Daily logs on air monitoring during excavation activities shall be prepared and maintained by the Contractor and submitted to the DDC either on request or upon completion of the work.
3. A closeout report shall be submitted by the Contractor to the DDC upon completion of the work within the defined exclusion zones. This report shall summarize the daily safety and monitoring logs and provides an overview of the Contractor's performance

regarding environmental and safety issues. The report shall carefully document all areas where contamination has been found including pictures, addresses of locations, and potential sources.

4. Medical Surveillance Examinations: The Contractor shall submit to the DDC the name, office address and telephone number of the medical consultant utilized. Evidence of baseline medical examinations together with the evidence of the ability to wear National Institute for Occupational Safety and Health (NIOSH) approved respirators (as specified in American National Standards Institute (ANSI) Z88.6) shall be provided to the DDC for all construction personnel who are to enter the exclusion zones.
5. Accident Reports: All accidents, spills, or other health and safety incidents shall be reported to the DDC.

D. Health and Safety Plan

The HASP shall comply with OSHA regulations 29 CFR 1910.120/1926.65. This document shall at a minimum contain the following:

1. Description of work to be performed
2. Site description
3. Key personnel
4. Worker training procedures
5. Work practices and segregation of work area
6. Hazardous substance evaluation
7. Hazard assessment
8. Personal and community air monitoring procedures and action levels
9. Personal protective equipment
10. Decontamination procedures
11. Safety rules
12. Emergency procedures
13. Spill control, dust control, vapor/odor suppression procedures
14. Identification of the nearest hospital and route
15. Confined space procedures
16. Excavation safety procedures

8.01 S.2 MEASUREMENT

Health and Safety Requirements

- A. 25% of the lump sum price will be paid when the following items are implemented or mobilized:

- Medical surveillance program
- Health and safety training
- Health and safety plan
- Environmental and personnel monitoring
- Instrumentation
- Spill control
- Dust control
- Personnel and equipment decontamination facilities
- Personnel protective clothing
- Communications
- Mobilization

- B. 50% will be paid in proportional monthly amounts over the period of work.
- C. 25% will be paid when the operation is demobilized and removed from the project site.

8.01 S.3 PRICE TO COVER

Health and Safety Requirements

The lump sum price bid for the health and safety requirements shall include all labor, materials, equipment, and insurance necessary to complete the work in accordance with these specifications. The price bid shall include, but not be limited to, the following:

- A. Providing training, safety personnel, air monitoring and medical examinations as specified.
- B. Providing safety equipment and protective clothing for site personnel, including maintenance of equipment on a daily basis; replacement of disposable equipment as required; decontamination of clothing, equipment and personnel; and all other health and safety activities or costs not paid for under other pay items in this Contract.
- C. Providing, installing, operating and maintaining on-site emergency medical and first aid equipment. This includes all furnishings, equipment, supplies and maintenance of all medical equipment, and all other health and safety items and services for which payment is not provided under other pay items in this Contract.
- D. Providing, installing, operating, maintaining, and decommissioning all personnel and equipment decontamination facilities, including decontamination pad, decontamination water supply, and all other items and services required for the implementation of the health and safety requirements for which pay items are not provided elsewhere in this Contract. Vehicle decontamination pads shall be included in the price of this item. Disposal of decontamination fluid shall be paid for under Item 8.01 W1 – Removal, Treatment and Discharge/Disposal of Contaminated Water.
- E. Spill Control
 - 1. Payment shall account for furnishing, installing, and maintaining all spill control equipment and facilities. Payment will include equipment and personnel to perform emergency measures required to contain any spillage and to remove spilled materials and soils or liquids that become contaminated due to spillage during work within the exclusion zones and handling of excavated soils and liquids from these areas. This collected spill material will be properly disposed of.
 - 2. Payment under this item shall not include testing, handling, transportation or disposal of petroleum-contaminated/potentially hazardous soils excavated during construction. The price for this work will be paid for under Items 8.01 C1 – Handling, Transporting and Disposal of Non-Hazardous Contaminated Soils, 8.01 C2 – Sampling and Testing of Contaminated/Potentially Hazardous Soil for Disposal Parameters or 8.01 H – Handling, Transporting and Disposal of Hazardous Soils, as appropriate.
- F. Dust Control

Payment shall account for furnishing, installing, and maintaining dust control equipment and facilities to be used whenever applicable dust levels are exceeded. Payment will include all necessary labor, equipment, clean water, foam, and all other materials required by the Dust Control Plan. The DOH Community Air Monitoring Plan (CAMP) may be used as guidance.

G. Vapor/Odor Suppression

Payment shall account for furnishing, installing and maintaining vapor/odor control equipment and facilities to be used whenever organic vapor monitoring or the presence of odors indicates that vapor suppression is required to protect workers or the public. Payment will include all necessary labor, equipment, clean water, foam and all other materials required by the Vapor/Odor Suppression Plan.

H. Mobilization/Demobilization

1. Mobilization

Payment shall include but not be limited to:

- a. All work required to furnish, install and maintain all signs, fencing, support zone facilities, parking areas and all temporary utilities;
- b. All work required to furnish, install, and maintain an office space with phone and utilities for health and safety personnel;
- c. All work required for complete preparation of lay down area for roll-off containers, including sampling, and any required fencing;
- d. All direct invoiced cost from bonding companies and government agencies for permits and costs of insurance; and
- e. All other items and services required for mobilization and site preparation.

2. Demobilization

Payment shall include but not be limited to: All work required to sample the area; remove from the site all equipment, temporary utilities and supporting facilities; performance of necessary decontamination and repairs; disposal of disposable equipment and protective gear and other items and services required for complete demobilization.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 S	Health and Safety	Lump Sum

ITEM 8.01 W1 REMOVAL, TREATMENT AND DISCHARGE/DISPOSAL OF CONTAMINATED WATER

8.01 W1.1 WORK TO INCLUDE

General: This work shall consist of the proper removal and disposal of all contaminated groundwater and decontamination water generated during construction operations. The Contractor shall be solely responsible for the proper disposal or discharge of all contaminated water generated at the job site. The Contractor will have the option of treating water on-site for discharge to the combined sanitary/storm sewer system or removing contaminated water for off-site disposal. The Contractor shall be responsible to choose a method compatible to the construction work and shall be compensated on a per day basis regardless of method employed. The Contractor will be compensated for only those days where the system is in full operation.

The Contractor shall retain a dewatering/water treatment Specialist (hereinafter the "Specialist") and laboratory as specified under Item 8.01 W2 – Sampling and Testing of Contaminated Water, to conduct any testing that may be required for disposal of impacted water.

The dewatering/water treatment Specialist is responsible to obtain all permits; perform all water sampling, testing; and provide ancillary services related to dewatering and water treatment. The Specialist shall at a minimum provide documentation to the Program Administration, Engineering Support Services (ESS) demonstrating the minimum requirements as set forth below:

1. The Specialist shall demonstrate that it has, at a minimum, three (3) years experience in the design of dewatering plans. The Specialist should demonstrate expertise dealing with issues associated with contaminated water. During that three (3) year period, the Specialist shall demonstrate that it provided dewatering and water treatment systems as a routine part of its daily operations.
2. The Specialist must be experienced in work of this nature, size, and complexity and must have previous experience in working with the DEC.
3. The Specialist shall furnish a project listing identifying the location, nature of services provided, owner, owner's contact, contact's telephone number, project duration and value for at least five (5) projects within the last three (3) years of a similar nature, size, and complexity to this one.
4. If conditions within the exclusion zone are deemed hazardous, then the Contractor and its independent Environmental Consultant shall ensure that all personnel working within identified exclusion zones and/or involved (direct contact) with the handling, storage or transport of hazardous and contaminated material shall have completed a minimum of forty (40) hours of Health and Safety Training on Hazardous Waste Sites in accordance with 29 CFR 1910.120(e). The training program shall be conducted by a qualified safety instructor. If conditions in the exclusion zone are deemed to be non-hazardous, the Specialist shall be responsible to provide site-specific training to its employees and other affected personnel.
5. The Contractor shall ensure that on-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations shall receive the training specified in above and at least eight (8) additional hours of specialized training on managing such operations at the time of job assignment.

The Contractor shall document all operations associated with the handling, sampling and disposal of contaminated water, and ensure that they are in compliance with applicable Federal, State and Local statutes and regulations.

The Contractor shall supply all labor, equipment, transport, plant, material, treatment, and other incidentals required to conduct the specified work of this section.

If water will be disposed of into the combined sanitary/storm sewer system, the Contractor shall ensure the Specialist treats the water to comply with the New York City Department of Environmental Protection (DEP) Sanitary/Combined and Storm Sewer Effluent Limit concentrations prior to discharge. The Contractor is responsible for providing settling or filtering tanks and any other apparatus required by DEP. Alternatively, the Contractor can provide a plan for transport and disposal at an off-site waste disposal facility.

Within forty-five (45) calendar days after award of Contract, the Contractor shall submit to the Program Administration, ESS for review, a Water Handling Plan (WHP). The WHP must be approved by the Program Administration, ESS, prior to the Contractor's commencement of work. The minimum requirements for the WHP are specified herein Item 8.01W 1.2, for each type of disposal (disposal into the combined sanitary/storm sewer or off-site disposal). The Contractor shall maintain a complete, up to date copy of the WHP on the job site at all times.

8.01 W1.2 CONSTRUCTION DETAILS

For each disposal method the Contractor proposes to utilize (disposal to combined sanitary/storm sewer or off-site disposal), the WHP shall include the information required in paragraphs A and B below, as appropriate.

A. On-site treatment and discharge into New York City combined sanitary/storm sewers.

1. Regulations: The Contractor shall comply with all applicable regulations. This includes but may not be limited to:
Title 15-New DEP Sewer Use Regulations.
2. Permits: The Contractor is solely responsible to obtain all necessary and appropriate Federal, State and Local permits and approvals. The Contractor will be responsible for performing all and any system pilot tests required for permit approval. This includes but may not be limited to:
 - a. Industrial waste approval for the New York City sewer system.
 - b. Groundwater discharge permit for the New York City sewer system (DEP Division of Sewer Regulation and Control), if discharge to sewer exceeds 10,000 gallons per day.
 - c. The Contractor shall comply with DEC State Pollutant Discharge Elimination System (SPDES) Permit Number GP-0-10-001, General Permit for Stormwater Discharges.
 - d. Long Island well point permit for Brooklyn and Queens sites, if well points are used for dewatering.
 - e. Wastewater quality control application, DEP.
3. The WHP for this portion of the work shall include at a minimum:

- a. Identification and design of Contractor's proposed treatment to assure that the water meets the DEP sewer use guidelines prior to discharge to the sewer, including identification of all materials, procedures, settling or filtering tanks, filters and other appurtenances proposed for treatment and disposal of contaminated water.
- b. The name, address and telephone number of the contact for the Contractor's proposed chemical laboratory, as well as the laboratory's certifications under Federal, State or non-governmental bodies.
- c. The name, address and telephone number of the contact for the Contractor's proposed independent Environmental Consultant.
- d. Copies of all submitted permit applications and approved permits the Contractor have received.

4. Materials

The Contractor shall supply all settling or filtering tanks, pumps, filters, treatment devices and other appurtenances for treatment, temporary storage and disposal of contaminated water. All equipment shall be suitable for the work described herein.

5. Execution

- a. The Contractor is solely responsible for disposal of all water, in accordance with all Federal, State and Local regulations.
- b. The Contractor is solely responsible for any treatment required to assure that water discharged into the sewer is in compliance with all permits and Federal, State and Local statutes and regulations.
- c. The Contractor is solely responsible for the quality of the water disposed of into the sewers.
- d. The Contractor is responsible for sampling and testing of water for the DEP Sanitary/Combined and Storm sewer Effluent Limit concentrations. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 – Sampling and Testing of Contaminated Water.
- e. The Contractor shall be responsible to maintain the discharge rate to the sewer such that all permit requirements are met, the capacity of the sewer is not exceeded and no surcharging occurs downstream due to the Contractor's actions. Dewatering by means of well points or deep wells will not be allowed in the Boroughs of Brooklyn or Queens where the rate of pumping exceeds forty-five (45) gallons per minute unless the appropriate permit has been secured from the DEC.
- f. Disposal of Treatment Media
 - (1) The Contractor shall be responsible for disposal or recycling of treatment media in accordance with all Federal, State and Local regulations.
 - (2) The Contractor shall provide the DDC with all relevant documentation concerning the disposal of treatment media, including manifests, bills of

loading, certificates of recycling or destruction and other applicable documentation.

- (3) **Disposal of treatment media shall not be considered as a separate pay item; instead it shall be considered as incidental work thereto and included in the unit price bid.**

B. Off-Site Disposal

1. Regulations: The Contractor shall conform to all applicable Federal, State and Local regulations pertaining to the transportation, storage and disposal of any hazardous and/or non-hazardous materials as listed in Attachment 2.
2. The following shall be submitted to the DDC prior to initiating any off-site disposal:
 - a.
 - (1) Name and waste transporter permit number
 - (2) Address
 - (3) Name of responsible contact for the hauler
 - (4) Any and all necessary permit authorizations for each type of waste transported
 - (5) Previous experience in performing the type of work specified herein
 - b. General information for each proposed treatment/disposal facility and at least one backup treatment/disposal facility
 - (1) Facility name and EPA identification number
 - (2) Facility location
 - (3) Name of responsible contact for the facility
 - (4) Telephone number for contact
 - (5) Unit of measure utilized at facility for costing purposes
 - c. A listing of all permits, licenses, letters of approval and other authorizations to operate, which are currently held and valid for the proposed facility as they pertain to receipt and management of the wastes derived from this Contract.
 - d. A listing of all permits, licenses, letters of approval and other authorizations to operate which have been applied for by the proposed facility but not yet granted or issued. Provide dates of application(s) submitted. Planned submittals shall also be noted.
 - e. The Contractor shall specify and describe the disposal/containment unit(s) that the proposed facility will use to manage the waste and provide dates of construction and beginning of use, if applicable. Drawings may be provided. The Contractor shall identify the capacity available in the units and the capacity reserved for the subject waste.
 - f. The Contractor shall provide the date of the proposed facility's last compliance inspection.

- g. A list of all active (unresolved) compliance orders, agreements, enforcement notices or notices of violations issued to the proposed facility shall be submitted. The source and nature of the cause of violation shall be stated, if known. If groundwater contamination is noted, details of the facility's groundwater monitoring program shall be provided.
- h. Description of all sampling and field/laboratory analyses that will be needed to obtain disposal facility approval.

3. Materials

All vessels for temporary storage and transport to an off-site disposal facility shall be as required in DOT regulations.

4. Execution

a. General

- (1) The Contractor shall organize and maintain the material shipment records/manifests required by Federal, State and Local law. The Contractor shall include all bills of lading, certificates of destruction, recycling or treatment and other applicable documents.
- (2) The Contractor shall coordinate the schedule for truck arrival and material deliveries at the job site to meet the approved project schedule. The schedule shall be compatible with the availability of equipment and personnel for material handling at the job site.
- (3) The Contractor shall inspect all vehicles leaving the project site to ensure that contaminated liquids are not spilling and are contained for transport.
- (4) The Contractor shall obtain letters of commitment from the waste haulers and the treatment, disposal or recovery facility to haul and accept shipment. The letter shall indicate agreement to handle and accept the specified estimated quantities and types of material during the time period specified in the project schedule and any time extension as deemed as necessary.
- (5) The Contractor shall verify the volume of each shipment of water from the site.
- (6) The Contractor is responsible for sampling and testing of water for off-site disposal. The quality of the data is the Contractor's responsibility. Any sampling and testing shall be conducted and paid in accordance with Item 8.01 W2 – Sampling and Testing of Contaminated Water.
- (7) The Contractor shall be responsible for any additional analyses required by the TSD facility, and for the acceptance of the water at an approved TSD facility.

b. Hauling

- (1) The Contractor shall not deliver waste to any facility other than the TSD facility(ies) listed on the shipping manifest.

- (2) The Contractor shall coordinate manifesting, placarding of shipments, and vehicle decontamination. All quantities shall also be measured and recorded upon arrival at the TSD facility(ies). If any deviation between the two records occurs, the matter is to be reported immediately to the DDC and shall be resolved by the Contractor to the satisfaction of the DDC.
- (3) The Contractor shall be held responsible for any and all actions necessary to remedy situations involving material spilled in transit or mud and dust tracked off-site. This cleanup shall be accomplished at the Contractor's expense.
- (4) The Contractor shall be responsible for inspecting the access routes for road conditions, overhead clearance and weight restrictions.
- (5) The Contractor shall only use the transporter(s) identified in the WHP for the performance of work. Only a transporter with a current Part 364 Waste Transporter Permit from DEC may transport this material. Any use of substitute or additional transporters must have previous written approval from the DDC at no additional cost to the City.
- (6) The Contractor shall develop, document, and implement a policy for accident prevention.
- (7) The Contractor shall not combine waste materials from other projects with material from this project.
- (8) The Contractor shall obtain for the City a hazardous waste generator identification number and will sign the manifest as the generator, if necessary.
- (9) No material shall be transported until approved by the DDC.

c. Disposal Facilities

- (1) The Contractor shall use only the TSD facility(ies) identified in the WHP for the performance of the work. Substitutions or additions shall not be permitted without prior written approval from the Program Administration, ESS, and, if approved, shall be at no extra cost to the City.
- (2) The Contractor shall be responsible for acceptance of the material at an approved TSD facility, for ensuring that the facility is properly permitted to accept the stated material, and that the facility provides the stated storage and/or disposal services.
- (3) The DDC reserves the right to contact and visit the disposal facility and regulatory agencies to verify the agreement to accept the stated material and to verify any other information provided. This does not in any way relieve the Contractor of his responsibilities under this Contract.
- (4) In the event that the identified and approved facility ceases to accept the stated materials or the facility ceases operations, it is the Contractor's responsibility to locate an alternate approved and permitted facility(ies) for accepting materials. The Contractor is responsible for making the necessary arrangements to utilize the facility(ies), and the alternate facility(ies) must be

approved in writing by the DDC in the same manner and with the same requirements as for the original facility(ies). This shall be done with no extra cost or delay to the City.

d. Equipment and Vehicle Decontamination

- (1) The Contractor shall design and construct a portable decontamination station to be used to decontaminate equipment and vehicles exiting the exclusion zone. The cost for this work shall be paid under Item 8.01 S – Health and Safety.

8.01 W1.3 METHOD OF MEASUREMENT

The quantity for on-site treatment and discharge or off-site disposal shall be on a per day basis.

8.01 W1.4 PRICE TO COVER

- A. The per day price bid for Item 8.01 W1 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for handling, transportation, disposal, documentation, permits, hauling, mobilization and demobilization, and any other incidentals thereto to complete the work.
- B. The Contractor will not be paid for water that is within the DEP Sewer Discharge Limits.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 W1	Removal, Treatment and Disposal/Discharge of Contaminated Water	Day

ITEM 8.01 W2 SAMPLING AND TESTING OF CONTAMINATED WATER

8.01 W2.1 WORK TO INCLUDE

A. Description

The work shall consist of sampling and testing of potentially contaminated groundwater, surface runoff within the excavated area and all contaminated water generated during the decontamination process.

B. Sampling and Testing

1. The Contractor is responsible, at a minimum, for sampling and testing of contaminated water for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations as listed in Attachment 1. The quality of the data is the Contractor's responsibility. Any additional testing required by the Federal, State and/or disposal facilities shall be included in the bid price of this Item.
2. All sampling and testing shall be conducted by a person trained in sampling protocols using accepted standard practices and/or the DEC sampling guidelines and protocols.
3. All sample containers shall be marked with legible sample labels which shall indicate the project name, sample location and/or container, the sample number, the date and time of sampling, preservatives utilized, how the sample was chilled to 4 degrees Celsius, and other information that may be useful in determining the character of the sample.
4. Chain-of-custody shall be tracked from laboratory issuance of sample containers through receipt of the samples.
5. The Contractor shall maintain a bound sample log book. The Contractor shall provide the DDC access to it at all times and shall turn it over to the DDC in good condition at the completion of the work. The following information, as a minimum, shall be recorded to the log:
 - a. Sample identification number
 - b. Sample location
 - c. Field observation
 - d. Sample type
 - e. Analyses
 - f. Date/time of collection
 - g. Collector's name
 - h. Sample procedures and equipment used
 - i. Date sent to laboratory/name of laboratory
6. Only dedicated sampling equipment may be used to collect these samples. All equipment involved in field sampling must be decontaminated before being brought to the site, and must be properly disposed of after use.

7. Samples shall be submitted to the Contractor's laboratory within the holding times for the parameters analyzed.
8. All analyses must be done by a laboratory that has received approval from the DOH's ELAP for the methods to be done. The Contractor must specify the laboratory in the WHP.
9. Analytical results for water discharged to the sewer and for off-site disposal must be submitted to the DDC no later than five (5) days after sample collection.
10. The City reserves the right to direct the Contractor to conduct alternative sampling in lieu of the parameters described above, if the situation warrants. The substitute sampling parameters shall be of equal or lesser monetary value than those described above, as determined by industry laboratory pricing standards.

8.01 W2.2 METHOD OF MEASUREMENT

Quantities for samples shall be measured as the number of sets of samples that are tested for the DEP Sanitary/Combined and Storm Sewer Effluent Limit concentrations. A set shall be defined as one (1) representative sample analyzed for the full range of DEP parameters as specified in attachment 1.

8.01 W2.3 PRICE TO COVER

The unit price bid per set for Item 8.01 W2 shall include the cost of furnishing all labor, materials, plant, equipment, and insurance for handling, transport, sampling, testing, documentation, permits, other incidentals necessary to complete the work of sampling and testing of contaminated water. Any additional costs incurred by the Contractor for sampling and testing of contaminated water shall be included in the bid price of this Item.

Payment will be made under:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>PAYMENT UNIT</u>
8.01 W2	Sampling and Testing of Contaminated Water	Set

ATTACHMENT 1

**New York City Department of Environmental Protection
Limitations for Discharge To Storm, Sanitary/Combined Sewer**

**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTEWATER TREATMENT**

Limitations for effluent to storm, sanitary or combined sewers

Parameter	Daily Limit	Units	Sample Type	Monthly Limit
Oil & Grease	15	mg/l	Instantaneous	
Total Petroleum Hydrocarbons	50	mg/l	Instantaneous	
pH Range (Storm sewer)	6.5-8.5	SU's	Instantaneous	
(Sanitary sewer)	5-11			
Benzene	134	ppb	Instantaneous	57
Ethyl benzene	380	ppb	Instantaneous	142
Toluene	74	ppb	Instantaneous	28
Xylenes Total	74	ppb	Instantaneous	28
Temperature	< 150	°F	Instantaneous	
Cadmium	2	mg/l	Instantaneous	
	0.69	mg/l	Composite	
Chromium VI	5	mg/l	Instantaneous	
Copper	5	mg/l	Instantaneous	
Lead	2	mg/l	Instantaneous	
Mercury	0.05	mg/l	Instantaneous	
Nickel	3	mg/l	Instantaneous	
Zinc	5	mg/l	Instantaneous	
Flash Point	> 140	°F	Instantaneous	
Total Suspended Solids	350	ppm	Instantaneous	
PCB's Total*	1	ppb	Composite	
Perc (Tetrachloroethylene)	20	ppb	Instantaneous	
MTBE (Methyl-Tert-Butyl-Ether)	10	ppb	Instantaneous	10
Naphthalene	47	ppb	Instantaneous	19

* Analysis for PCB's are requested only if both conditions listed below are met:

- 1) If proposed discharge > 10,000 gpd
- 2) If duration of discharge > 10 days

Analysis for PCB's must be conducted by USEPA Method 608 only with MDL = 65ppt

ATTACHMENT 2

Applicable Regulations

Applicable regulations include, but are not limited to:

1. 49 CFR 100 to 179 - DOT Hazardous Materials Transport and Manifest System Requirements
2. New York State Department of Environmental Conservation (DEC), Spills Technology and Remediation Series (STARS) Memo #1
3. 6 NYCRR 360-1 DEC Solid Waste Management Facilities
4. 6 NYCRR 364- Waste Transporter permits
5. Local restrictions on transportation of waste/debris
6. 40 CFR 260 to 272 - Hazardous Waste Management (RCRA)
7. 6 NYCRR 371 - Identification and Listing of Hazardous Wastes
8. 6 NYCRR 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
9. 6 NYCRR 373-1 - Hazardous Waste Treatment, Storage and Disposal Facility Permitting Requirements
10. 6 NYCRR 376 - Land Disposal Restrictions
11. Posted weight limitations on roads or bridges
12. Transportation Skills Programs, Inc. 1985 - Hazardous Materials and Waste Shipping Papers and Manifests
13. Other local restrictions on transportation of waste/debris
14. Occupational Safety and Health Administration (OSHA), Standards and Regulations, 29 CFR 1910 (General Industry)
15. OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response
16. OSHA Safety and Health Standards 29 CFR 1926 (Construction Industry)
17. OSHA 29 CFR 1910.146 Confined Space Entry Standard
18. Standard Operating Safety Guidelines, EPA Office of Emergency and Remedial Response Publication, 9285.1-03
19. NIOSH / OSHA / USCG / EPA Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1986)
20. U.S. Department of Health and Human Services (DHHS) "NIOSH Sampling and Analytical Methods," DHHS (NIOSH) Publication 84-100
21. ANSI, Practice for Respiratory Protection, Z88.2 (1980)
22. ANSI, Emergency Eyewash and Shower Equipment, Z41.1 (1983)
23. ANSI, Protective Footwear, Z358.1 (1981)
24. ANSI, Physical Qualifications for Respirator Use, Z88.6 (1984)
25. ANSI, Practice for Occupational and Educational Eye and Face Protection, Z87.1 (1968)
26. Water Pollution Control Federation "Manual of Practice No. 1, Safety in Wastewater Works"

27. NFPA No. 327 "Standard Procedures for Cleaning and Safeguarding Small Tanks and Containers"
28. Occupational Safety and Health Act Confined Space Entry Standard 29 CFR 1910.146.87
29. Department of Transportation 49 CFR 100 through 179
30. Department of Transportation 49 CFR 387 (46 FR 30974, 47073)
31. Environmental Protection Agency 40 CFR 136 (41 FR 52779)
32. Environmental Protection Agency 40 CFR 262 and 761
33. Resource Conservation and Recovery Act (RCRA)
34. Any transporter of hazardous or non-hazardous materials shall be licensed in the State of New York and all other states traversed in accordance with all applicable regulations.

ATTACHMENT 3

Definitions

Contaminated Groundwater and Decontamination Fluids: Groundwater within the excavation trench or decontamination water that contains regulated compounds above the NYCDEP Discharge to Sanitary/Combined Sewer Effluent limits.

Disposal or Treatment Facility: A facility licensed to accept either non-hazardous regulated waste or hazardous waste for either treatment or disposal.

Exclusion Zone: Work area that will be limited to access by Contractor personnel specifically trained to enter the work area only. The exclusion zone will be set up to secure the area from the public and untrained personnel. The project health and safety program will apply to all construction personnel including persons entering the work area.

Hazard Assessment: An assessment of any physical hazards that may be encountered on a work site.

Hazardous Soils: Soils that exhibit any of the characteristics of a hazardous waste, namely ignitability, corrosivity, reactivity, and toxicity, as defined in 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.

Hazardous Substance Evaluation: An evaluation of the possible or known presence of any hazardous substances that may be encountered on a job site. This evaluation is included in the Health and Safety Plan and will include the identification and description of any hazardous substances expected to be encountered. Material Safety Data Sheets (MSDS) will be included for each substance.

Health and Safety Plan: A plan employed at a work site that describes all the measures that will be taken to assure that all work is conducted in a safe manner, and that the health of the workers and the public will be insured.

Material Handling Plan: A plan outlining the methods that will be employed to handle, transport and dispose of contaminated materials.

Non-Hazardous Contaminated Soils: Soils which exhibit a distinct chemical or petroleum odor, or exhibit elevated photoionization detector readings but are not classified as hazardous waste under 6 NYCRR Part 371, Section 371.3 and 40 CFR Section 261.

New York State Health Department's Environmental Laboratory Approval Program: A program by which the state of New York approves and accredits environmental testing laboratories.

PCBs: Polychlorinated biphenyls are a group of toxic compounds commonly used as a coolant in transformers and other electrical components.

Photoionization Detector: A hand held instrument used to measure volatile organic compounds in air. The instrument ionizes the organic molecules through the use of an ultraviolet lamp.

RCRA Hazardous Waste Characteristics: Characteristics of a material which may indicate the material is hazardous. These include: ignitability, corrosivity, reactivity, and toxicity.

Total Petroleum Hydrocarbons: An analytical procedure used to determine the total amount of petroleum compounds in a material.

END OF ADDENDUM NO.6
This Addendum Consists of Thirty Eight (38) Pages

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

PROJECT ID: HWMP LZ004M (MED622)

RECONSTRUCTION OF
PERSHING SQUARE WEST
PARK AVENUE WEST (FROM 40ST STREET TO 42ND STREET)

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

TOGETHER WITH ALL WORK INCIDENTAL THERETO

BOROUGH OF MANHATTAN
CITY OF NEW YORK

ADDENDUM NO. 7

DATED: February 7, 2013

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS

1. The Contractor shall be responsible for compliance with all the provisions of the following Sections and Schedules, which are hereby made a part of the original contract documents:
 - A. "SECTION U: Additional Contract Requirements Applying to Work Performed in the Presence of Privately Owned Utility Facilities" (Pages A7-4 through A7-14)
 - B. Schedule U-1 (Page A7-15)
 - C. Schedules U-2 (one for each Utility Company) (Pages A7-16 through A7-42)
 - D. Section U-3 (Page (A7-43) in this Addendum) as per the Private Utilities reference document for SECTION U called "CET SPECIFICATIONS AND SKETCHES", dated November 2010, and;
 - E. Private Utility drawings (15 Sheets) consisting of:
 - General Notes and Conditions, (Coned) (1 Sheet).
 - Conduit Plates (Coned) (6 Sheets).
 - Proposed Electric Plans (Coned) (1 Sheet).
 - Steam Plate (Coned) (2 Sheets).
 - Proposed Steam Work Plan (Coned) (1 Sheet).
 - Special Care Excavation (Coned) (1 Sheet).
 - Mass Excavation Plan (Coned) (1 Sheet).
 - Existing Facility Plan (ECS) (1 Sheet).
 - Special Care Excavation Plan (ECS) (1 Sheet).

2. Each facility operator shall provide inspectors at the work site to inspect methods of interference work, verify quantities and items of Utility Work, and coordinate all phases of the facility operator operations.
3. In addition, the following statements are made to provide clarification of various paragraphs under Section U:
 - A. Section U, ¶4, requires the Contractor to immediately commence negotiations with each Company for an Interference Agreement under which the Company will compensate the Contractor for any Interference Work which the Company does not elect to perform with its own forces or by specialty contractors retained by the Company. Thus the Contractor is on notice that its work under the Contract may be affected by Interference Work performed by (a) the Contractor pursuant to a separate Interference Agreement with the Company, (b) the Company, or (c) partly by each.
 - B. Section U, ¶2, informs the Contractor that the duration of the Contract as shown in Schedule A includes the time which may be necessary for the Contractor to perform the necessary Interference Work.
 - C. The Contractor is hereby informed that the duration of the Contract as shown in Schedule A includes the time which may be necessary for the Company to perform whatever portion of the Interference Work which the Company elects to perform with its own forces or by specialty contractors retained by the Company.
 - D. Section U informs the Contractor that the City has entered into a Utility Agreement with the Companies regarding interferences to the City work in this Contract created by the facilities owned and/or operated by such Companies. Pursuant to this Addendum, a sample of the Utility Agreement letter as executed by the Companies is annexed on page A7-14, as an Exhibit to the Contract. Signed copies of those Utility Agreement letters are on file with NYCDDC.
 - E. The City has no contract with any of the Companies for work on or adjacent to the site of work under this Contract, and the Companies are not "Other Contractors" as defined for the purposes of this Contract. The Contractor is reminded, however, that pursuant to Section U, ¶4, the City will not compensate the Contractor for any direct and/or indirect costs related to Interference Work, regardless of whether such Interference Work is covered by an Interference Agreement between the Contractor and the Company or is performed by the Company using its own forces or by specialty contractors retained by the Company.
 - F. Section U, ¶14, provides that the provisions of Section U are material provisions of the Contract and that the Contractor's failure to comply with the procedures set forth in Section U

are sufficient for the Commissioner to declare the Contractor in default pursuant to Article 48 of the Contract. Pursuant to this Addendum, the Contractor is informed that the Performance Bond required of the Contractor pursuant to the Contract is not deemed to guarantee performance of any of the Interference Work.

Section U: Additional Contract Requirements Applicable to Work Performed in the Presence of Privately Owned Utility Facilities

The Contractor is hereby notified that pursuant to the law and franchise agreements issued by the City, certain private utility and public service companies named in Schedule U-1 ("the Companies") own and/or operate surface and/or subsurface facilities within the limits of this contract. The existence of these facilities impacts the productivity of the City work called for in the contract. In order to improve coordination of the City construction with the private utility facilities owned and/or operated by the Companies named in Schedule U-1, Article 1.06.30 of the Standard Highway Specifications of the New York City Department of Transportation, Dated November 1, 2010; Articles 1.06.14 through 1.06.17 of the General Provisions of the Standard Water Main Specifications of the New York City Department of Environmental Protection, dated August 1, 2009; and/or Articles 1.06.14 through 1.06.17 of the Standard Sewer Specifications of the New York City Department of Environmental Protection, Dated August 1, 2009; as applicable, are amended and will be implemented as follows:

1. Pre-engineering:

The anticipated scopes of private utility facilities interferences and anticipated work items and specifications are included in this contract. The locations of these interferences are indicated on the plans and/or listed in the specifications for this contract, and a schedule of estimated quantities by type of interference expected to be encountered within the limits of this project area have been listed on Schedule U-2. In addition, in Section U-3 the Companies have provided standard details and methods for supporting, protecting, relocating, and/or working around their facilities when they are in interference with City contract work.

2. Means and methods for City work:

- a) The Contractor is hereby notified that the utility interferences identified on the plans and/or listed in the Specifications to be known conditions which may impact the performance of, and/or interferes with, City work. The contractor will be required to perform such utility work as directed by the Resident Engineer in order to clear all utility interferences from the project site as required for satisfactory completion of City work within specified contract schedule.
- b) In areas serviced by overhead electric system, the contractor understands and by bidding for this contract agrees that he/she has reviewed the section 'U' package and

that he/she will be required to perform the public work in the presence of energized electrical overhead lines and appurtenances located in areas adjacent and/or within the project area. As a consequence he/she will select means and method of construction appropriate to maintain the safety clearances required or as permitted by contract specifications (e.g. "CET 350 – Overhead Accommodation Protection of Overhead Facilities, Poles, and Appurtenances") in order to avoid damaging the insulation or shielding of these lines and also to prevent knocking them down. The duration of the contract as shown in Schedule A thus includes the time which may be necessary for the Contractor to remove, repair, protect, support, shift, relocate, temporarily remove and replace, work around and/or work in the presence of the Companies' facilities ("Interference Work") as described on the plans and/or specifications of the contract during the progress of the City work.

3. *Field inspection prior to construction:*

Prior to the start of any contract work in areas serviced by overhead electric lines, and after the award to the apparent low bidder for this contract, the contractor must request a field walk of the project area along with the operator of the overhead electrical facilities and the DDC Engineer-In-Charge. At that time the facility operator, pursuant to contract specification (e.g. "CET 350 – Overhead Accommodation Protection of Overhead Facilities, Poles, and Appurtenances") will confirm the type and condition of the overhead electrical lines and the sufficiency of their insulating properties with respect to the means and methods proposed by the contractor. The contractor must be prepared to describe in enough details his/her proposed means and methods of construction operations in order to anticipate the likelihood that electric lines insulation would be cut or otherwise compromised. Also such details will allow the facility operator to anticipate the need for added insulation and/or shielding of non-insulated lines.

4. *Compensation for interference work:*

Compensation for Interference Work is a matter of adjustment between the Contractor and each private utility company located within the limits of the project area and whose utility facilities are affected by City contract work. In particular, the City will not compensate the Contractor for any direct and/or indirect costs related to Interference Work, including, but not limited to, lost profit, increased overhead, or any other impact costs. Upon receipt of a Notice of Award from the City, the Contractor shall immediately commence negotiations with each of the Companies concerning the manner in which and the price for which the Contractor,

through its own forces or by others hired by it, will perform and be paid by the Company for all necessary Interference Work as defined above that the Company(ies) choose(s) not to perform with its(their) own forces or by specialty Contractors hired by it (them) (as per "Interference Agreement"). (Specialty contractors' work is limited to (i) insulation installation and removal, (ii) live gas and steam work, (iii) cleanup and disposal of hazardous materials, (iv) splicing live electrical and telecommunications facilities, and (v) work not traditionally performed by general construction contractors.)

5. *Interference Agreement:*

1. The Companies have provided estimate of the quantity of each of the types of interferences expected to be encountered in the contract in Schedule U-2. Although the parties may negotiate an Interference Agreement in any format or manner they deem fit, the Contractor is hereby advised that the Companies have indicated to the City that they will agree to compensate the Contractor on a unit price basis according to the Quantity and Types of Interferences expected to be encountered on this Contract as stated in Schedule U-2.
2. Furthermore, in Section U-3, standard unit work measurement and payment provisions are specified and shall apply only if the Contractor and affected Utility companies enters into a unit price based Interference Agreement, otherwise the unit of work measurement, and payment provisions set forth in Section U-3 shall not apply. The Contractor shall notify the City upon concluding an Interference Agreement with each of the Companies, which shall be binding and final once concluded.

6. *City contract work to continue without Interference Agreement :*

If, prior to the start of construction, as directed by the City's Order to work / Notice To Proceed (OTW/ NTP) date any of the Companies and the Contractor have not concluded an Interference Agreement as described above, then the City construction will proceed as ordered and the Contractor will be directed by the Resident Engineer to perform the City work on Time, Material and Equipment basis (T&M) as specified in standard City contract agreement Article 26.2. T&M records will include identification of types of utility facilities interfering with City work, utility facility owners, specifying the nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such work and crew size, such as: name and number of each worker employed on such work. T&M records will also indicate the hours of active time, standby time and idle time. The Company (ies) and the Contractor will maintain separate records of the actual quantity and cost of labor, materials,

and equipment expended, and will provide copies of this information to the other party on a daily basis for reconciliation. These T&M records along with cost evaluations will be submitted daily to the Resident Engineer for review and approval. The total cost of City work will be based on quantity of work performed multiplied by unit price contract bid items. The total interference cost will be calculated as the difference between the total T&M cost and total cost for City work. The Resident Engineer will conduct a monthly reconciliation session of the daily T&M records with the affected Company (ies) and contractor. If the contractor and affected utility companies cannot reconcile their T&M records, by the last day of each month, then the Resident Engineer will submit the approved City's T&M records along with total cost evaluations to the DDC Director of Construction who will review these records and recommend approval and validity certification by the DDC Deputy Commissioner.

1. Copies of the DDC approved and certified T&M records will then be transmitted by the DDC to the contractor and the utility companies. These certified records may be used by the contractor for compensation claims against the responsible private facility owners, or may be used by any party as supporting documentation in dispute regarding compensation for performing Interference Work as identified in Schedule U-2. The contractor will be required to perform City work while invoices are submitted by the contractor to the Utility companies for payment within 30 days, or while compensation disputes between contractor and affected company (ies) are submitted to Binding Arbitration process described in Paragraph 10.
2. All issues related to utility work and/ or delays due to compensation disputes or claims against utility companies are not allowable as justification for granting contract time extensions. The City may assess liquidated damages specified in the contract for net overall delays suffered by City contract work as a result of utility issues, disputes and claims.
3. The standard City contract dispute resolution process specified in Article 27 "Presentation of disputes to Commissioner", of the standard City contract agreement is not applicable to any disputes related to utility work and/ or compensation for such work or claim against utility companies. Utility work issues, disputes and claims may only be submitted to Binding Arbitration process described in Paragraph 10.
4. The contractor will notify the Resident Engineer when utility capital work not specified in Schedule U2 and/ or for utility work that require the intervention of company utility specialty crews causes excessive contractor's labor and equipment standby or idleness

and, thereby jeopardizing the City project schedule. The Resident Engineer will submit the facts to the DDC Director of construction who will recommend to the Deputy Commissioner regarding the issuance of a "48 hours notice" to the concerned utility company as authorized by the New York City administrative Code Section 19-143 and/or Section 24-521 as applicable.

5. Utility delays caused by utility capital work not listed in Schedule U2 and/ or by unavailability of utility specialty crews cannot be discounted for earning any contractual bonus when such bonus clause is included in a contract. However, if such specified bonus is not earned or disallowed by the City or if the City assesses specified liquidated damages as a result of such excessive delays, the contractor may seek damages from the responsible utility company (ies).

7. *Extra utility work with Utility Agreement:*

If during construction the Contractor encounters utility facilities interferences or utility scope of work that it believes is not covered by the Interference Agreement as described above, then the Contractor shall immediately notify the Company in writing, with a copy to the City, describing the nature and location of the extra work in question. The Company then has five (5) business days to investigate the conditions and then:

1. Advise the Contractor and the City in writing that no interference with its facilities exists at the location in question, and hence that the Contractor may proceed with City work without providing for any impact from Company facilities;
2. Advise the Contractor and the City in writing that the Interference Agreement negotiated pursuant to Paragraph (6), above, provides for the scope of work encountered, specifying the exact unit items and/or terms of the agreement that cover the work;
3. Advise the Contractor and the City in writing that it intends to perform the necessary utility Work with company forces or with its own contractor including, but not limited to, relocating its facility out of the way of the proposed City work. In this case, the Company shall provide a written schedule for the performance of the utility work it proposes to perform, which shall be subject to approval by the City based on its impact to the Contractor's currently approved progress schedule. Upon approval of the Company's schedule by the City, the Contractor shall provide access to the worksite to the Company and/or any contractors hired by it to perform this utility work. If necessary, the City may

grant a contract time extension for delays caused by the performance of such utility work by the company.

4. Reasonably specify in writing the scope of work to be performed by the Contractor on behalf of the Company that is not covered under the Interference Agreement negotiated pursuant to Paragraph (6), including, but not limited to, relocating, supporting, and/or protecting the Company's facilities, and/or shifting the City facility if approved by the Resident Engineer, and/or otherwise changing its operations to work in the presence of the Company's facilities. Should the Company elect this option, it must adequately define and provide an initial price offer for the work required to be performed.

8. *Means and Methods for utility work:*

Upon receipt of the Company's determination pursuant to paragraphs 7.2, or 7.4, above, the Contractor shall determine reasonable means and methods of performing the work defined by the Company. These means and methods are subject to approval of the Company, which shall not be unreasonably withheld. If, however, the Company objects to the Contractor's proposed means and methods then it shall define an alternate method of construction. Upon receipt of the Company's approval or its proposed alternate method of construction, the Contractor shall commence performance of the work defined by the Company as soon as possible, and shall perform the work in a good, workmanlike, and efficient manner, using the means and methods approved by the Company, in order to permit the City work to proceed in the most expeditious manner possible, but without imposing unreasonable and/or unnecessary costs on the Company. It is expressly understood by all parties that the City's rights pursuant to Article 4 of the Contract apply to Utility Work performed pursuant to this section.

9. *Disputed utility work covered by a utility agreement:*

The City Work will continue as described in paragraph 6 above. In the event of any dispute between the Company (ies) and the Contractor regarding any issue related to the performance of, or payment for, utility work, including, but not limited to, any indirect or impact costs incurred by the Contractor due to the Utility Work and/or to the existence of facilities owned or operated by the Company (ies) on the line of the work. The Company (ies) and the Contractor hereby agree to submit to each other a "Final Offer," in writing, by certified mail. Each party shall then have three business days to consider each other's Final Offer. In the event that neither party accepts the other's Final Offer within those three days, the Company (ies) and the Contractor agree to immediately submit the dispute to binding arbitration as described in Paragraph 10. During the pendency of any arbitration, the Company (ies) and the Contractor

shall maintain separate records of the actual quantity and cost of labor, materials, and equipment expended, and to provide copies of this information to the other party on a daily basis for reconciliation. Any and all disagreement with the records maintained and provided by the other, must be documented in writing to all parties. However, these records are solely for the benefit of presentation to the arbitrator, whose decision may not necessarily be based on these records and in any event is final. Both parties should be aware that the City will not confirm or deny the accuracy of any records maintained by either party for Utility work performed pursuant to a Utility Agreement. While the arbitration is pending, the Company shall pay the Contractor on a monthly basis, based on the price offered by the Company to the Contractor for the performance of the work.

10. Arbitration of utility work:

The arbitration of the issues described above shall be conducted pursuant to the Construction Industry Arbitration Rules of the American Arbitration Association (hereinafter "the Rules" and "AAA") in effect on the date the arbitration is initiated except as set forth herein. The arbitration award shall be final and binding upon the parties to the arbitration and judgment upon the award may be entered in a court having jurisdiction.

- (a) Once an arbitrator(s) has been appointed by the AAA, the arbitration shall be scheduled as promptly as possible given the arbitrator(s) and the parties' schedules.
- (b) No later than seven days prior to the first arbitration hearing, Company and Contractor shall submit to the arbitrator(s), and to each other, a summary of each party's respective position and such other information as is deemed appropriate, along with a copy of each party's Final Offer as specified in paragraph 9.
- (c) The arbitration shall be conducted and concluded in two days.
- (d) On the morning of the first day of the arbitration, Contractor and/or representatives shall have 3 ½ hrs to make a presentation of its claim to the arbitrator. During its presentation, Contractor shall not be permitted to produce any documents or cost records which have not already been provided to the Company. Contractor shall be permitted to produce any analysis or description of its claim which has been prepared for the purpose of its presentation.
- (e) After lunch, Company and/or its representatives shall have two hours to ask Contractor questions about its claim and its presentation. Thereafter the arbitrator(s) shall have two hours to ask Contractor questions about its claim and its presentation.

- (f) On the morning of the second day of the arbitration, Company and/or its representatives shall have 3 ½ hours to make a presentation of its claim to the arbitrator. During its presentation, the Company shall not be permitted to produce any documents or cost records which have not already been provided to the Contractor. The Company shall be permitted to produce any analysis or description of its claim which has been prepared for the purpose of its presentation.
- (g) After lunch, Contractor and/or its representatives shall have two hours to ask Company questions about its claim and its presentation. Thereafter the arbitrator(s) shall have two hours to ask Company questions about its claim and its presentation.
- (h) Subject to the above time limitations, the arbitrator(s) may conduct the arbitration in such manner as the arbitrator(s) deems reasonable.
- (i) The arbitrator(s) shall then have one week to select in writing, as the arbitrator ('s) award, that party's Final Offer which appears to be more reasonable, based on the presentations at the arbitration hearings.
- (j) The arbitrator shall have no discretion to grant an award other than one of the two Final Offers submitted by the parties.
- (k) Any award for work that has already been performed shall be paid on the 7th day after receipt of the arbitrator's decision, or on the 30th day after completion of the work, whichever is later. Payment for work not yet completed at the time of the arbitrator's decision shall be paid within 30 days of completion of work. Interest shall accrue from the date payment is due at the rate of 9% per annum. Either party may cause judgment to be entered in accordance with the arbitrator(s) decision in a court in the State of New York, County of New York.
- (l) The arbitrator's fees and any other costs of the arbitration shall be initially shared equally by Company and Contractor. The non-prevailing party shall then pay all arbitrator's fees and costs of the arbitration and shall reimburse the prevailing party for its share of such fees and costs theretofore paid.
- (m) The parties may, at any time, settle any matter submitted to arbitration.

11. Order-out waiver:

The Contractor and all subcontractors hired by it, if an Interference Agreement is executed as specified between the concerned parties, agree to waive any rights they may have, if any, under law, contract or otherwise to compel the City to assert any right the City may have, including the issuance of any directives required under the New York City Administrative Code, Section 19-143 and Section 24-521, to require any or all of the Companies to maintain, repair, replace, protect, support, shift, alter, relocate, and/or remove utility facilities in connection with the work to be performed under this contract. However, nothing in this section shall preclude the City from exercising its rights under the Law to issue such a directive to the Company.

12. Cost of insurance:

Each of the named Companies, at their option and if an Interference Agreement is executed as specified between the concerned parties, may be named as an additional insured on all insurance policies required to be maintained under this contract. In the event that a Company opts to be so named as an additional insured, the actual incremental cost, if any, to the Contractor of providing such insurance coverage shall be borne by that Company. The Contractor shall provide a written statement from its insurance provider documenting the actual cost of this added coverage to the Company. Under no circumstances shall the cost of insurance coverage on behalf of any Company be borne by the City. Nothing in this paragraph shall be interpreted to imply the City's acceptance of any additional responsibility or liability for any matter related to the performance of Utility Work. In particular, the Company and the Contractor bear joint and full responsibility to ensure that any Utility Work performed by the Contractor is in compliance with all applicable government and Company regulations.

13. Cost of utility interference work:

The Companies, by virtue of a prior agreement with the City, have agreed to perform their obligations described in this section. It is expressly understood that the cost of Utility Work shall not be a charge against the City, but shall be a matter for adjustment between the Contractor and the Company or Companies concerned. The City and the Contractor agree that the Companies are third party beneficiaries of this section of the contract, if a Utility Agreement is executed between the contractor and utility company (ies). The provisions of this section shall govern in all cases where Company property interferes with or is about to be disturbed by the City work, notwithstanding any other provision of the Contract, except for Natural Gas transmission/distribution facilities covered subject to the Gas Facility Cost Allocation Act (GFCAA) and covered separately in this contract.

14. Default declaration:

The Contractor agrees that the provisions of this section are material provisions of the contract, and that the Contractor's failure to comply with the procedures set forth above are sufficient for the Commissioner to declare the Contractor in default pursuant to Article 48 of the Contract.

15. NYS Labor Law:

The Contractor is hereby advised that New York State Labor Law applies to public work. The work described in this Section U of the contract performed by utility company (ies) with their own forces or vendors hired by such company (ies) is not public work.

16. Facility operators:

The insurance requirements in Paragraph 12 of this Section U apply to: (i) additional Companies, if any, who were not named in Schedule "A" but which have executed a Utility Agreement with the contractor for utility work; and (ii) additional coverage, if any, paid for by Utility Companies whose utility facilities are located within the project limits, that they may require for the utility work pursuant to an utility agreement between the contractor and such utility companies.

[End]

"STANDARD UTILITY LETTER OF AGREEMENT"

(Name)
Deputy Commissioner, Infrastructure Division
Department of Design and Construction
30-30 Thomson Avenue
Long Island City, NY 11101

RE: City Work Performed in the Presence of Private Utility Facilities
Project No: _____

Dear (Name):

This letter is to certify that _____, has requested the inclusion of the attached "Section U: Additional contract requirements applying to work performed in the presence of privately owned utility." The company agrees to abide by the terms of this Section U and to submit a schedule listing the scope of work, including the items and estimated quantities, and types of utility facilities to be supported and protected at the company's own expenses due to interferences with the Public work.

Sincerely,

By: Authorized Company Representative

Title

NOTARY PUBLIC

CERTIFIED AS TO FORM
AND LEGAL AUTHORITY:

By: _____

SCHEDULE U-1

HWMPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

SCHEDULE U-1 LISTING OF COMPANIES NAMED FOR THIS CONTRACT

<u>COMPANY NAME</u>	<u>CONTACT NAME</u>	<u>CONTACT TELEPHONE</u>
CON EDISON	CONSTANTINE SANOULIS	718-425-6875
VERIZON	AUBREY MAKHANLALL	718-977-8165
TIME WARNER	JOHN PIAZZA	718-888-4261

SCHEDULE U-2
 FOR INFORMATION ONLY
 ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE
 FOR CONSOLIDATED EDISON

HWPLZ004M

Rev.1

Park Avenue West bet. E. 40th St. & E. 42nd St.

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .1)	EA	1
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)	EA	20
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)	EA	6
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)	EA	3
CET 109.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .1)	EA	2
CET 109.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .2)	EA	4
CET 109.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .3)	EA	4
CET 110.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" (TYPE .1)	EA	2
CET 111.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" (TYPE .1)	EA	2
CET 111.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" (TYPE .2)	EA	1
CET 111.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" (TYPE .3)	EA	2
CET 200.1	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTIONS (INVERT DEPTH 4'-6" TO 5' FOR TYPE 2 OR UP TO 5'-6 FOR TYPE 3)	L.F.	221
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA	3
CET 300	SPECIAL CARE EXCAVATION AND BACKFILING	C.Y.	113
CET 301	SPECIAL CARE HAND EXCAVATION OIL-O-STATIC ENCROACHMENT	C.Y.	33
CET 302	FIELD COATING OF OIL-O-STATIC FEEDER PIPES	L.F.	223
CET 303	FURNISH, DELIVER AND INSTALL 3/8" CLEAN SAND BACKFILL	C.Y.	87

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Park Avenue West bet. E. 40th St. & E. 42nd St.

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 304 A	FURNISH, DELIVER AND INSTALL CONCRETE ROAD BASE	C.Y.	19
CET 304 B	FURNISH, DELIVER AND INSTALL CONCRETE SIDEWALK	C.Y.	2
CET 304 C	BREAK, REMOVE, AND DISPOSE CONCRETE SIDEWALK	C.Y.	2
CET 305	FURNISH AND INSTALL ASPHALT PAVING MIXTURE	TONS	1
CET 330E-A.1	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/O SHEETING (TYPE .1)	L.F.	104
CET 330E-B.1	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/ SHEETING (TYPE .1)	L.F.	201
CET 330E-B.2	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/ SHEETING (TYPE .2)	L.F.	70
CET 330E-B.3	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/ SHEETING (TYPE .3)	L.F.	249
CET 400	TEST PITS FOR UTILITY FACILITIES	C.Y.	80
CET 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	S.F.	100
CET 405.2	EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL OR GREATER THAN 5 FEET (C.Y.)	C.Y.	53
CET 406	EXCAVATION FOR UTILITY STRUCTURE	C.Y.	79
CET 410.7	MASS EXCAVATION (VOLUME OVER 40% UP TO AND INCLUDING 60%) FROM TOP OF ROADWAY EQUAL OR GREATER THAN 5 FT	C.Y.	1,356
CET 450.2	CONSTRUCTION FIELD SUPPORT REQUIRING AVERAGE SMALL SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .2)	CRHRS	100
CET 450.3	CONSTRUCTION FIELD SUPPORT REQUIRING AVERAGE MEDIUM SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .3)	CRHRS	750
CET 600.1	INSTALL CONDUIT IN UNPAVED AREA (1 EA. 2", 4" OR 5" CONDUIT - ALL TYPES)	L.F.	33
CET 600.2	INSTALL CONDUIT IN UNPAVED AREA. (2 EA. 4" CONDUIT - ALL TYPES)	L.F.	12

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Park Avenue West bet. E. 40th St. & E. 42nd St.

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 600.4	INSTALL CONDUIT IN UNPAVED AREA (6 EA. 4" CONDUIT - ALL TYPES)	L.F.	62
CET 600.5	INSTALL CONDUIT IN UNPAVED AREA (8 EA. 4" CONDUIT - ALL TYPES)	L.F.	62
CET 601.1	INSTALL CONDUIT IN PAVED AREA (1 EA. 2", 4" OR 5" CONDUIT - ALL TYPES)	L.F.	104
CET 601.2	INSTALL CONDUIT IN PAVED AREA (2 EA. 4" CONDUIT - ALL TYPES)	L.F.	140
CET 601.3	INSTALL CONDUIT IN PAVED AREA (4 EA. 4" CONDUIT - ALL TYPES)	L.F.	75
CET 601.4	INSTALL CONDUIT IN PAVED AREA (6 EA. 4" CONDUIT - ALL TYPES)	L.F.	1,297
CET 601.5	INSTALL CONDUIT IN PAVED AREA (8 EA. 4" CONDUIT - ALL TYPES)	L.F.	208
CET 603E.1	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT	L.F.	58
CET 603E.2	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT	L.F.	387
CET 636 EE RD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (34" TO UNDER 41" WIDTH)	EA	5
CET 636 EI RD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (125" TO UNDER 170" WIDTH)	EA	1
CET 636 EI SW	ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (125" TO UNDER 170" WIDTH)	EA	8
CET 636 RM	REBUILDING & MODIFICATIONS OF UTILITY STRUCTURE	C.Y.	2
CET 638N	INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE	C.Y.	65
CET 638R	BREAK OUT AND REMOVE UTILITY STRUCTURE	C.Y.	78
CET 700	SPECIAL MOD. OF WORK METHODS TO ACCOMM/ PROTECT U.G. FACILITIES WITH LIMITED COVER	C.Y.	40
CET 798	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES	L.F.	15

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Park Avenue West bet. E. 40th St. & E. 42nd St.

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
CET 799	MODIFICATION OF NON CONCRETE TROLLEY STRUCTURES REMOVAL WHEN PARALLEL TO UTILITY FACILITIES	L.F.	150
CET 802B	SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW CURBS	L.F.	153
CET 1006V	6" VERTICAL OR ROLLED WATER MAIN OFFSET	EA	1
CET 1012V	12" VERTICAL OR ROLLED WATER MAIN OFFSET	EA	4

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Park Avenue West bet. E. 40th St. & E. 42nd St.

CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TESTPIT (TYPE .1)	EA
	<i>At the following locations:</i>	
	11'± N/S/C E. 40th St., 77'± W/W/C Park Avenue	
	Total quantity for CET 100.1	= 1
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)	EA
	<i>At the following locations:</i>	
	S/S E. 40th St., 39'± W/W/C Park Avenue	
	Int. Of E. 40th St. & Park Avenue	
	51'± S/S/C E. 40th St., 9'± E/W/C Park Avenue	
	Int. Of E. 41st Street & Park Avenue	
	Int. Of E. 41st St. & Park Avenue	
	39'± N/N/C E. 41st Street, 10'± E/W/C Park Avenue	
	15'± E/W/C Park Avenue, 75'± N/N/C E. 41st Street	
	24'± E/E/C Park Avenue, 4'± N/N/C E. 42nd St.	
	E. 42nd St, B/t Park Ave. & Lexington Ave.	
	Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 108.1	= 20
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)	EA
	<i>At the following locations:</i>	
	21'± N/S/C E. 40th St., 89'± W/W/C Park Avenue	
	Int. Of E. 41st Street & Park Avenue	
	25'± W/W/C Park Avenue, 5'± S/N/C E. 41st Avenue	
	31'± S/S/C E. 41st St., 10'± E/W/C Park Ave.	
	Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 108.2	= 6
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)	EA
	<i>At the following locations:</i>	
	10'± S/N/C E. 42nd St., 32'± W/W/C Park Avenue	
	Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 108.3	= 3

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CET 109.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .1)	EA
	<i>At the following locations:</i>	
	Int. Of E. 42nd Street & Park Avenue	
	11'± E/E/C Park Avenue, 15'± N/N/C E. 42nd St.	
	Total quantity for CET 109.1 = 2	
CET 109.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .2)	EA
	<i>At the following locations:</i>	
	15'± S/S/C E. 42nd St., 10'± E/W/C Park Avenue	
	63'± E/E/C Park Avenue, 24'± N/S/C E. 42nd St.	
	Total quantity for CET 109.2 = 4	
CET 109.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" (TYPE .3)	EA
	<i>At the following locations:</i>	
	Int. Of E. 40th St. & Park Avenue	
	64'± E/E/C Park Avenue, 25'± S/N/C E. 42nd St.	
	Total quantity for CET 109.3 = 4	
CET 110.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" (TYPE .1)	EA
	<i>At the following locations:</i>	
	East 40th Street B/t Madison Avenue and Park Avenue	
	Total quantity for CET 110.1 = 2	
CET 111.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" (TYPE .1)	EA
	<i>At the following locations:</i>	
	12'± N/N/C E. 40th St., 9'± E/W/C Park Avenue	
	Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 111.1 = 2	
CET 111.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" (TYPE .2)	EA
	<i>At the following locations:</i>	
	22'± N/S/C E. 42nd St., 25'± W/W/C Park Avenue	
	Total quantity for CET 111.2 = 1	

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CET 111.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" (TYPE .3)	EA
	<i>At the following locations:</i>	
	19'± N/N/C E. 40th Street, 14'± E/W/C Park Avenue Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 111.3 = 2	
CET 200.1	EXTRA DEPTH EXCAVATION OF CATCH BASIN CHUTE CONNECTIONSS (INVERT DEPTH 4'-6" TO 5' FOR TYPE 2 OR UP TO 5'-6 FOR TYPE 3)	LF.
	<i>At the following locations:</i>	
	E. 41st St., 65'± W/W/C Park Avenue, 89'± S/S/C E. 42nd St., W/S Park Avenue 32'± S/S/C E. 42nd St., W/S Park Avenue Int. Of E. 41st Street & Park Avenue E. 41st B/t Park Ave. & Madison Ave.	
	Total quantity for CET 200.1 = 221	
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA
	<i>At the following locations:</i>	
	E. 41st St., B/t Madison Ave. and Park Avenue E. 41st St., B/t Madison Ave. and Park Avenue Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 225.1B = 3	
CET 300	SPECIAL CARE EXCAVATION AND BACKFILING	C.Y.
	<i>At the following locations:</i>	
	N/S E. 40th St., 70'± W/W/C Park Avenue Int. Of E. 40th St. & Park Avenue Park Avenue Bet. E. 40th St. & E. 41st St. Int. Of E. 41st St. & Park Avenue E. 42nd St, B/t Park Ave. & Lexington Ave. E. 42nd St, B/t Park Ave. & Lexington Ave.	
	Total quantity for CET 300 = 113	

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CET 301	SPECIAL CARE HAND EXCAVATION OIL-O-STATIC ENCROACHMENT	C.Y.
	<i>At the following locations:</i>	
	Int. Of E. 42nd St. & Park Avenue	
	AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 301 = 33	
CET 302	FIELD COATING OF OIL-O-STATIC FEEDER PIPES	L.F.
	<i>At the following locations:</i>	
	Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 302 = 223	
CET 303	FURNISH, DELIVER AND INSTALL 3/8" CLEAN SAND BACKFILL	C.Y.
	<i>At the following locations:</i>	
	Int. Of E. 41st St. & Park Avenue	
	E. 42nd St. B/t Vanderbilt Avenue and Lexington Avenue	
	Int. Of E. 42nd St. & Park Avenue	
	E. 42nd St, B/t Park Ave. & Lexington Ave.	
	E. 41st St., B/t Madison Ave. and Park Avenue	
	Park Avenue Bet. E. 40th St. & E. 41st St.	
	Int. Of E. 40th St. & Park Avenue	
	E. 40th St., B/t Madison Ave. & Park Avenue.	
	Total quantity for CET 303 = 87	
CET 304 A	FURNISH, DELIVER AND INSTALL CONCRETE ROAD BASE	C.Y.
	<i>At the following locations:</i>	
	E. 40th St., B/t Madison Ave. & Park Avenue.	
	Int. Of E. 40th St. & Park Avenue	
	Int. Of E. 41st Street & Park Avenue	
	Total quantity for CET 304 A = 19	
CET 304 B	FURNISH, DELIVER AND INSTALL CONCRETE SIDEWALK	C.Y.
	<i>At the following locations:</i>	
	E. 40th St., B/t Madison Ave. & Park Avenue.	
	Total quantity for CET 304 B = 2	

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CET 304 C	BREAK, REMOVE, AND DISPOSE CONCRETE SIDEWALK	C.Y.
	<i>At the following locations:</i>	
	E. 40th St., B/t Madison Ave. & Park Avenue.	
	Total quantity for CET 304 C = 2	
CET 305	FURNISH AND INSTALL ASPHALT PAVING MIXTURE	TONS
	<i>At the following locations:</i>	
	At Various Locations	
	Total quantity for CET 305 = 1	
CET 330E-A.1	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/O SHEETING (TYPE .1)	L.F.
	<i>At the following locations:</i>	
	9'± N/S/C E. 40th St., 55'± W/W/C Park Avenue	
	12'± N/S/C E. 40th St., 55'± W/W/C Park Avenue	
	Total quantity for CET 330E-A.1 = 104	
CET 330E-B.1	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/ SHEETING (TYPE .1)	L.F.
	<i>At the following locations:</i>	
	East 40th Street B/t Madison Avenue and Park Avenue	
	Total quantity for CET 330E-B.1 = 201	
CET 330E-B.2	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/ SHEETING (TYPE .2)	L.F.
	<i>At the following locations:</i>	
	N/S E. 40th St., 40'± W/W/C Park Avenue	
	21'± W/W/C Park Avenue, 6'± N/S/C E. 42nd St.	
	Total quantity for CET 330E-B.2 = 70	
CET 330E-B.3	SUPPORT & PROTECT ELEC, GAS & STEAM FAC. DURING EXCAVATION OF CITY TRENCH WHEN FAC. LIE W/IN TRENCH LIMITS W/ SHEETING (TYPE .3)	L.F.
	<i>At the following locations:</i>	
	N/S E. 40th St., Bet Madison Ave. and Park Ave.	
	Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 330E-B.3 = 249	

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CET 400	TEST PITS FOR UTILITY FACILITIES	C.Y.
	<i>At the following locations:</i>	
	At Various Locations	
	Total quantity for CET 400 = 80	
CET 403	PLACING STEEL PROTECTION PLATES FOR UTILITY FACILITIES	S.F.
	<i>At the following locations:</i>	
	At Various Locations	
	AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 403 = 100	
CET 405.2	EXCAVATION FOR INSTALLATION OF UTILITY FACILITIES WITH TOTAL DEPTHS EQUAL OR GREATER THAN 5 FEET (C.Y.)	C.Y.
	<i>At the following locations:</i>	
	Int. Of E. 41st St. & Park Avenue	
	Total quantity for CET 405.2 = 53	
CET 406	EXCAVATION FOR UTILITY STRUCTURE	C.Y.
	<i>At the following locations:</i>	
	Int. Of E. 41st Street & Park Avenue	
	Int. Of E. 42nd St. & Park Avenue	
	Int. Of E. 42nd St. & Park Avenue	
	49'± W/W/C Lexington Ave. & 25'± S/S/C E. 42nd St.	
	Int. Of E. 41st Street & Park Avenue	
	East 40th Street and Park Avenue	
	213'± E/E/C Madison Ave. & 12'± S/S/C East 40th St.	
	Total quantity for CET 406 = 79	
CET 410.7	MASS EXCAVATION (VOLUME OVER 40% UP TO AND INCLUDING 60%) FROM TOP OF ROADWAY EQUAL OR GREATER THAN 5 FT	C.Y.
	<i>At the following locations:</i>	
	Int. Of E. 40th St. & Park Avenue	
	Int. Of E. 41st Street & Park Avenue	
	Int. Of E. 42nd St. & Park Avenue	
	Total quantity for CET 410.7 = 1,356	

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CET 450.2	CONSTRUCTION FIELD SUPPORT REQUIRING A VERAGE SMALL SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .2) <i>At the following locations:</i> At Various Locations Total quantity for CET 450.2 = 100	CRHRS
CET 450.3	CONSTRUCTION FIELD SUPPORT REQUIRING A VERAGE MEDIUM SIZE CREW CAPABLE OF PERFORMING VARIOUS TASKS (TYPE .3) <i>At the following locations:</i> At Various Locations Total quantity for CET 450.3 = 750	CRHRS
CET 600.1	INSTALL CONDUIT IN UNPAVED AREA (1 EA. 2", 4" OR 5" CONDUIT - ALL TYPES) <i>At the following locations:</i> E. 40th St. B/t Madison Ave & Park Ave. AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 600.1 = 33	L.F.
CET 600.2	INSTALL CONDUIT IN UNPAVED AREA. (2 EA. 4" CONDUIT - ALL TYPES) <i>At the following locations:</i> S/S E. 40th St., 30'± W/W/C Park Avenue AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 600.2 = 12	L.F.
CET 600.4	INSTALL CONDUIT IN UNPAVED AREA (6 EA. 4" CONDUIT - ALL TYPES) <i>At the following locations:</i> Int. Of E. 42nd St. & Park Avenue AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 600.4 = 62	L.F.
CET 600.5	INSTALL CONDUIT IN UNPAVED AREA (8 EA. 4" CONDUIT - ALL TYPES) <i>At the following locations:</i> Int. Of E. 42nd St. & Park Avenue AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 600.5 = 62	L.F.

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CET 601.1	INSTALL CONDUIT IN PAVED AREA (1 EA. 2", 4" OR 5" CONDUIT - ALL TYPES)	L.F.
	<i>At the following locations:</i>	
	N/S E. 40th St., 108'± W/W/C Park Avenue	
	E. 40th St., B/t Madison Ave. & Park Avenue.	
	63'± N/N/C E. 41st St., 15' E/W/C Park Ave.	
	AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 601.1 = 104	
CET 601.2	INSTALL CONDUIT IN PAVED AREA (2 EA. 4" CONDUIT - ALL TYPES)	L.F.
	<i>At the following locations:</i>	
	28'± E/W/C Park Avenue, 38'± N/N/C E. 41st St.	
	E. 42nd St. B/t Vanderbilt and Park Avenue	
	AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 601.2 = 140	
CET 601.3	INSTALL CONDUIT IN PAVED AREA (4 EA. 4" CONDUIT - ALL TYPES)	L.F.
	<i>At the following locations:</i>	
	20'± N/S/C E. 40th St., 217' W/W/C Park Ave.	
	Int. Of E. 41st St. & Park Avenue	
	AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 601.3 = 75	
CET 601.4	INSTALL CONDUIT IN PAVED AREA (6 EA. 4" CONDUIT - ALL TYPES)	L.F.
	<i>At the following locations:</i>	
	Int. Of E. 41st St. & Park Avenue	
	20'± N/S/C E. 40th St., 139' W/W/C Park Ave.	
	W/S Park Avenue, B/t E.41st St. & E. 42nd St.	
	E. 42nd St., B/t Vanderbilt Ave. & Lexington Ave.	
	E. 42nd St., B/t Vanderbilt Ave. & Lexington Ave.	
	E. 42nd St, B/t Park Ave. & Lexington Ave.	
	AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 601.4 = 1,297	

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CET 601.5	INSTALL CONDUIT IN PAVED AREA (8 EA. 4" CONDUIT - ALL TYPES) <i>At the following locations:</i> 20'± N/S/C E. 40th St., 217' WW/C Park Ave. East 40th Street B/t Madison Avenue and Park Avenue AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 601.5 = 208	L.F.
CET 603E.1	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITHOUT CONCRETE ENCASEMENT <i>At the following locations:</i> North Sdw. E. 40th St., B/t Madison Ave. & Park Ave. AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 603E.1 = 58	L.F.
CET 603E.2	INSTALL UTILITY CONDUITS PLACED IN FINAL POSITION WITH CONCRETE ENCASEMENT <i>At the following locations:</i> N/S E. 40th St., Bet. Masidon Ave. and Park Ave. S/S E. 40th St., B/t Madison Ave. & Park Avenue 20'± N/S/C E. 40th St., B/t Madison Ave. & Park Ave. N/S E. 41st St. Bet. Madison Ave. & Park Ave. AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 603E.2 = 387	L.F.
CET 636 EE RD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (34" TO UNDER 41" WIDTH) <i>At the following locations:</i> E. 40th St., B/t Madison Ave. & Park Avenue. Int. Of E. 41st St & Park Avenue Int. Of E. 42nd St. & Park Avenue Int. Of E. 40th St. & Park Avenue Total quantity for CET 636 EE R = 5	EA
CET 636 EI RD	ADJUSTMENT OF UTILITY HARDWARE IN ROADWAY (125" TO UNDER 170" WIDTH) <i>At the following locations:</i> Int. Of E. 41st Street & Park Avenue AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 636 EI R = 1	EA

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CET 636 EI SW	ADJUSTMENT OF UTILITY HARDWARE IN SIDEWALK (125" TO UNDER 170" WIDTH)	EA
	<i>At the following locations:</i>	
	Park Ave. (West Sidewalk) B/t E. 41st Street & E. 42nd Street AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 636 EIS = 8	
CET 636 RM	REBUILDING & MODIFICATIONS OF UTILITY STRUCTURE	C.Y.
	<i>At the following locations:</i>	
	Int. of E.41st St. and Park Avenue AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 636 RM = 2	
CET 638N	INSTALLATION OF FIELD CONSTRUCTED UTILITY STRUCTURE	C.Y.
	<i>At the following locations:</i>	
	12'± N/S/C E. 40th St., 20'± W/W/C Park Avenue Int. Of E. 41st Street & Park Avenue Int. Of E. 42nd St. & Park Avenue Int. Of E. 40th St. & Park Avenue Int. Of E. 42nd St. & Park Avenue 49'± W/W/C Lexington Ave. & 25'± S/S/C E. 42nd St. 213'± E/E/C Madison Ave. & 12'± S/S/C East 40th St.	
	Total quantity for CET 638N = 65	
CET 638R	BREAK OUT AND REMOVE UTILITY STRUCTURE	C.Y.
	<i>At the following locations:</i>	
	12'± N/S/C E. 40th St., 20'± W/W/C Park Avenue Int. Of E. 41st Street & Park Avenue Int. Of E. 42nd St. & Park Avenue Int. Of E. 40th St. & Park Avenue 72'± N/N/C E. 41st St., 2'± E/W/C Park Avenue 72'± N/N/C E. 41st St., 2'± E/W/C Park Avenue Int. Of E. 42nd St. & Park Avenue 73'± W/W/C Lexington Ave. & 25'± S/S/C E. 42nd Street 213'± E/E/C Madison Ave. & 12'± S/S/C East 40th St. AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE	
	Total quantity for CET 638R = 78	

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CET 700	SPECIAL MOD. OF WORK METHODS TO ACCOMM/ PROTECT U.G. FACILITIES WITH LIMITED COVER <i>At the following locations:</i> W/S E. 42nd St., B/t Park Ave. & Vanderbilt Ave. Int. Of E. 42nd St. and Park Ave. AS SHOWN ON CONTRACT DRAWINGS AND DIRECTED BY A CON EDISON REP. Total quantity for CET 700 = 40	C.Y.
CET 798	MODIFICATION OF NON CONCRETE YOKE TROLLEY STRUCTURES REMOVAL WHEN CROSSING UTILITY FACILITIES <i>At the following locations:</i> E. 42nd St, B/t Park Ave. & Vanderbilt Ave. AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 798 = 15	L.F.
CET 799	MODIFICATION OF NON CONCRETE TROLLEY STRUCTURES REMOVAL WHEN PARALLEL TO UTILITY FACILITIES <i>At the following locations:</i> E. 42nd St., B/t Vanderbilt Ave. & Lexington Ave. Total quantity for CET 799 = 150	L.F.
CET 802B	SPECIAL MODIFICATION OF WORK FOR INSTALLATION OF NEW CURBS <i>At the following locations:</i> Int. Of E. 41st St. & Park Avenue Int. Of E. 42nd Street & Park Avenue AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 802B = 153	L.F.
CET 1006V	6" VERTICAL OR ROLLED WATER MAIN OFFSET <i>At the following locations:</i> 39'± W/W/C Park Avenue, S/S E. 40th St. AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE Total quantity for CET 1006V = 1	EA

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CET 1012V

12" VERTICAL OR ROLLED WATER MAIN OFFSET

EA

At the following locations:

20'± W/W/C Park Avenue, 7'± N/S/C E. 40th St.

Int. Of E. 40th St. & Park Avenue

Int. Of E. 41st Street & Park Avenue

AS ENCOUNTERED AND DIRECTED BY A CON EDISON REPRESENTATIVE

Total quantity for CET 1012V = 4

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FOR INFORMATION ONLY

ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE

FOR EMPIRE CITY SUBWAY

PERSHING SQUARE PLAZA

BOROUGH OF MANHATTAN

CET ITEM NUMBER	DESCRIPTION	Unit of Measure	Estimated Quantity
CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .1)	EA.	4.00
CET 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .2)	EA.	1.00
CET 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .3)	EA.	1.00
CET 101.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	EA.	7.00
CET 101.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	EA.	1.00
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)	EA.	37.00
CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)	EA.	5.00
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)	EA.	3.00
CET 108.4	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .4)	EA.	1.00
CET 109.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	EA.	13.00
CET 109.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	EA.	2.00
CET 109.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)	EA.	1.00
CET 109.4	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .4)	EA.	1.00
CET 110.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .1)	EA.	1.00
CET 110.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .2)	EA.	1.00
CET 110.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .3)	EA.	1.00
CET 110.4	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .4)	EA.	1.00
CET 111.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .1)	EA.	13.00
CET 111.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .2)	EA.	3.00
CET 111.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .3)	EA.	1.00
CET 111.4	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .4)	EA.	1.00
CET 225.1A	REMOVAL AND INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.	2.00

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ENGINEER'S ESTIMATE OF QUANTITY AND TYPES OF INTERFERENCE

FOR EMPIRE CITY SUBWAY

PERSHING SQUARE PLAZA

BOROUGH OF MANHATTAN

CET ITEM NUMBER	DESCRIPTION	Unit of Measure	Estimated Quantity
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.	1.00
CET 225.1C	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.	1.00
CET 300	SPECIAL CARE EXCAVATION & BACKFILLING	C.Y.	50.00
CET 304A	FURNISH, DELIVER & INSTALL CONCRETE ROAD BASE	C.Y.	11.50
CET 305	FURNISH & INSTALL ASPHALT PAVING MIXTURE	TONS	7.50
CET 330T	SUPPORT & PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR CLOSE PROXIMITY TO TRENCH LIMITS	L.F.	480.00
CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITIES	C.Y.	355.00
CET 402T.1A	EXIST. OCCUPIED CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITH CONCR. ENCSMNT.	L.F.	3,030.00
CET 402T.2	EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITHOUT CONCR. ENCSMNT.	L.F.	1,110.00
CET 500	REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED)	L.F.	50.00
CET 636 ED RD	ADJUSTMENT OF UTILITY HARWARE IN ROADWAY (30" TO UNDER 34" WIDTH)	EA.	1.00
CET 700	SPECIAL MOD. OF WORK MTHDS TO ACCOM./PROTECT U.G. FACIL. W. LMTD CVR.	C.Y.	40.00
CET 802A	SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK	S.F.	120.00
CET 802B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	L.F.	95.00
CET 1006V	6" VERTICAL OR ROLLED WATER MAIN OFFSET	EA.	2.00
CET 1012V	12" VERTICAL OR ROLLED WATER MAIN OFFSET	EA.	4.00
CET 1020V	20" VERTICAL OR ROLLED WATER MAIN OFFSET	EA.	2.00

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CET 100.1	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .1)	EA.
	At the following locations:	
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	3.00
	Total quantity for CET 100.1 =	4.00
CET 100.2	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .2)	EA.
	At the following locations:	
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	1.00
	Total quantity for CET 100.2 =	1.00
CET 100.3	UTILITIES CROSSING TRENCH FOR CATCH BASIN CHUTE CONNECT. AND/OR TEST PIT (TYPE .3)	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	1.00
	Total quantity for CET 100.3 =	1.00
CET 101.1	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .1)	EA.
	At the following locations:	
	PARK AVENUE BTW. E. 41ST STREET AND E. 42ND STREET	2.00
	E. 42ND STREET BTW. VANDERBILT AVENUE AND PARK AVENUE	5.00
	Total quantity for CET 101.1 =	7.00
CET 101.2	UTILITIES CROSSING TRENCH FOR SEWERS OVER 12" TO 24" DIAMETER (TYPE .2)	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	1.00
	Total quantity for CET 101.2 =	1.00
CET 108.1	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .1)	EA.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	5.00
	PARK AVENUE S/O E. 40TH STREET	4.00
	INTERSECTION OF PARK AVENUE AND E. 40TH STREET	2.00
	PARK AVENUE BTW. E. 40TH STREET AND E. 42ST STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	7.00
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	5.00
	E. 42ND STREET BTW. VANDERBILT AVENUE AND PARK AVENUE	1.00
	E. 42ND STREET E/O PARK AVENUE	12.00
	Total quantity for CET 108.1 =	37.00

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CET 108.2	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .2)	EA.
	At the following locations:	
	PARK AVENUE S/O E. 40TH STREET	1.00
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	2.00
	INTERSECTION OF PARK AVENUE AND E. 40TH STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	1.00
	Total quantity for CET 108.2 = 5.00	
CET 108.3	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .3)	EA.
	At the following locations:	
	PARK AVENUE S/O E. 40TH STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 40TH STREET	1.00
	PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	1.00
	Total quantity for CET 108.3 = 3.00	
CET 108.4	UTILITIES CROSSING TRENCH FOR WATERMAIN UP TO AND INCL. 12" DIAMETER (TYPE .4)	EA.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	1.00
	Total quantity for CET 108.4 = 1.00	
CET 109.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .1)	EA.
	At the following locations:	
	PARK AVENUE S/O E. 40TH STREET	4.00
	INTERSECTION OF PARK AVENUE AND E. 40TH STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	1.00
	E. 42ND STREET BTW. VANDERBUILT AVENUE AND PARK AVENUE	3.00
	E. 42ND STREET E/O PARK AVENUE	4.00
	Total quantity for CET 109.1 = 13.00	
CET 109.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .2)	EA.
	At the following locations:	
	PARK AVENUE S/O E. 40TH STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 40TH STREET	1.00
	Total quantity for CET 109.2 = 2.00	
CET 109.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .3)	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	1.00
	Total quantity for CET 109.3 = 1.00	

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CET 109.4	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 12" AND UP TO 24" DIAMETER (TYPE .4)	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	1.00
	Total quantity for CET 109.4 = 1.00	
CET 110.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .1)	EA.
	At the following locations:	
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	1.00
	Total quantity for CET 110.1 = 1.00	
CET 110.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .2)	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	1.00
	Total quantity for CET 110.2 = 1.00	
CET 110.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .3)	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	1.00
	Total quantity for CET 110.3 = 1.00	
CET 110.4	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 24" AND UP TO 36" DIAMETER (TYPE .4)	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	1.00
	Total quantity for CET 110.4 = 1.00	
CET 111.1	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .1)	EA.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	4.00
	PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	3.00
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	1.00
	E. 42ND STREET E/O PARK AVENUE	4.00
	Total quantity for CET 111.1 = 13.00	

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CET 111.2	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .2)	EA.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	1.00
	PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	1.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	1.00
	Total quantity for CET 111.2 = 3.00	
CET 111.3	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .3)	EA.
	At the following locations:	
	PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	1.00
	Total quantity for CET 111.3 = 1.00	
CET 111.4	UTILITIES CROSSING TRENCH FOR WATERMAIN OVER 36" AND UP TO 48" DIAMETER (TYPE .4)	EA.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	1.00
	Total quantity for CET 111.4 = 1.00	
CET 225.1A	REMOVAL AND INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.
	At the following locations:	
	E. 42ND STREET BTW. VANDERBULT AVENUE AND PARK AVENUE	2.00
	Total quantity for CET 225.1A = 2.00	
CET 225.1B	INSTALLATION OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.
	At the following locations:	
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	1.00
	Total quantity for CET 225.1B = 1.00	
CET 225.1C	REMOVAL OF CATCH BASINS WITH UTILITY INTERFERENCES	EA.
	At the following locations:	
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	1.00
	Total quantity for CET 225.1C = 1.00	
CET 300	SPECIAL CARE EXCAVATION & BACKFILLING	C.Y.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	50.00
	Total quantity for CET 300 = 50.00	

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CET 304A	FURNISH, DELIVER & INSTALL CONCRETE ROAD BASE	C.Y.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	11.50
	Total quantity for CET 304A =	11.50
CET 305	FURNISH & INSTALL ASPHALT PAVING MIXTURE	TONS
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	7.50
	Total quantity for CET 305 =	7.50
CET 330T	SUPPORT & PROTECTION OF COMMUNICATION UTILITY FACILITIES DURING EXCAVATION OF CITY TRENCH WHEN FACILITIES LIE IN OR CLOSE PROXIMITY TO TRENCH LIMITS	L.F.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	185.00
	PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	40.00
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	15.00
	E. 42ND STREET W/O PARK AVENUE	25.00
	E. 42ND STREET E/O PARK AVENUE	215.00
	Total quantity for CET 330T =	480.00
CET 401	TRENCH EXCAVATION FOR ADJUSTMENT OF UTILITIES	C.Y.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	201.00
	PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	110.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	37.00
	PARK AVENUE BTW. E. 41ST STREET AND E. 42ND STREET	7.00
	Total quantity for CET 401 =	355.00
CET 402T.1A	EXIST. OCCUPIED CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITH CONCR. ENCSMNT.	L.F.
	At the following locations:	
	E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	2130.00
	PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	600.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	300.00
	Total quantity for CET 402T.1A =	3030.00

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CET 402T.2 EXIST. OCCUPIED NON-CONCR. ENCASED CONDUITS PLCD. IN FINAL POS. WITHOUT CONCR. ENCSMNT. L.F.

At the following locations:

E. 40TH STREET BTW. MADISON AVENUE AND PARK AVENUE	640.00
PARK AVENUE BTW. E. 40TH STREET AND E. 41ST STREET	450.00
PARK AVENUE BTW. E. 41ST STREET AND E. 42ND STREET	20.00

Total quantity for CET 402T.2 = 1110.00

CET 500 REMOVAL OF ABANDONED UTILITY CONDUITS (NON-CONCRETE ENCASED) L.F.

At the following locations:

AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	50.00
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Total quantity for CET 500 = 50.00

CET 636 EE RD ADJUSTMENT OF UTILITY HARWARE IN ROADWAY (34" TO UNDER 41" WIDTH) EA.

At the following locations:

INTERSECTION OF PARK AVENUE AND E. 42ND STREET	1.00
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Total quantity for CET 636 EE RD = 1.00

CET 700 SPECIAL MOD. OF WORK MTHDS TO ACCOM/PROTECT U.G. FACIL. W. LMTD CVR. C.Y.

At the following locations:

E. 41ST STREET W/O PARK AVENUE	3.00
INTERSECTION OF PARK AVENUE AND E. 41ST STREET	9.00
PARK AVENUE BTW. E. 41ST STREET AND E. 42ND STREET	8.00
INTERSECTION OF PARK AVENUE AND E. 42ND STREET	20.00

Total quantity for CET 700 = 40.00

CET 802A SPECIAL CARE EXCAVATION AND RESTORATION FOR SIDEWALK S.F.

At the following locations:

E. 41ST STREET W/O PARK AVENUE	15.00
INTERSECTION OF PARK AVENUE AND E. 41ST STREET	22.00
PARK AVENUE BTW. E. 41ST STREET AND E. 42ND STREET	18.00
E. 42ND STREET BTW. VANDERBILT AVENUE AND PARK AVENUE	65.00

Total quantity for CET 802A = 120.00

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CET 802B	SPECIAL CARE EXCAVATION AND RESTORATION FOR CURB WORK	L.F.
	At the following locations:	
	E. 41ST STREET W/O PARK AVENUE	6.00
	INTERSECTION OF PARK AVENUE AND E. 41ST STREET	15.00
	PARK AVENUE BTW. E. 41ST STREET AND E. 42ND STREET	5.00
	INTERSECTION OF PARK AVENUE AND E. 42ND STREET	55.00
	E. 42ND STREET BTW. VANDERBILT AVENUE AND PARK AVENUE	14.00
	Total quantity for CET 802B =	95.00
CET 1006V	6" VERTICAL OR ROLLED WATER MAIN OFFSET	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	2.00
	Total quantity for CET 1006V =	2.00
CET 1012V	12" VERTICAL OR ROLLED WATER MAIN OFFSET	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	4.00
	Total quantity for CET 1012V =	4.00
CET 1020V	20" VERTICAL OR ROLLED WATER MAIN OFFSET	EA.
	At the following locations:	
	AS ENCOUNTERED OR DIRECTED BY VERIZON FIELD REPRESENTATIVE	2.00
	Total quantity for CET 1020V =	2.00

FOR INFORMATION ONLY
ENGINEER'S ESTIMATE OF QUANTITIES AND TYPES OF INTERFERENCE
TIME WARNER CABLE OF NEW YORK CITY
HWPLZ004M
Pershing Square West
Borough of Manhattan

CET ITEM	DESCRIPTION	UNITS	ESTIMATED QUANTITY
108.1	UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO & INCLUDING 12" DIAMETER	EA	2
111.1	UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" TO 48" DIAMETER	EA	1
700	SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UTILITY FACILITIES WITH LIMITED COVER	CY	3
802B	SPECIAL CARE EXCAVATION & RESTORATION FOR CURB WORK	LF	4

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 Pershing Square West
 Borough of Manhattan**

CET 108.1 UTILITIES CROSSING TRENCH FOR WATER MAIN UP TO & INCLUDING 12" DIAMETER At the following location: NWC Park Ave. & East 41st Street East 40th Street E/O Madison Ave.	EA 1 1 Total quantity for CET 108.1 2
CET 111.1 UTILITIES CROSSING TRENCH FOR WATER MAIN OVER 36" TO 48" DIAMETER At the following location: East 40th Street E/O Madison Ave.	EA 1 Total quantity for CET 111.1 1
CET 700 SPECIAL MODIFICATION OF WORK METHODS TO ACCOMMODATE/PROTECT UNDERGROUND FACILITIES WITH LIMITED COVER At the following location: NWC Park Ave. & East 41st Street	CY 3 Total quantity for CET 700 3
CET 802B SPECIAL CARE EXCAVATION & RESTORATION FOR CURB WORK At the following location: NWC Park Ave. & East 41st Street	LF 4 Total quantity for CET 802B 4

SECTION U-3

(NO TEXT IN THIS SECTION)

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END OF ADDENDUM No.7
This Addendum consists of Forty-Four (44) pages
And Fifteen (15) sheets of Contract Drawings





NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

**INFRASTRUCTURE DIVISION
BUREAU OF DESIGN**

VOLUME 3 OF 3

PROJECT ID: HWPLZ004M

RECONSTRUCTION OF PERSHING SQUARE WEST

PARK AVENUE WEST
FROM 40TH STREET TO 42ND STREET

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

Together With All Work Incidental Thereto

BOROUGH OF MANHATTAN
CITY OF NEW YORK

Contractor.

Dated _____, 20____
