



PROJECT ID: S216-404A

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

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:

Demolition of DSNY Facilities at Gansevoort Peninsula

LOCATION:
BOROUGH:
CITY OF NEW YORK

4 Bloomfield Street
Manhattan 10004

CONTRACT NO. 1

GENERAL CONSTRUCTION WORK

DSNY

Syska - Hennessy Group



Date: February 20, 2014

4-088



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

DR. FENIOSKY A. PEÑA-MORA
Commissioner

JOHN GODDARD
Agency Chief
Contracting Officer

January 02, 2015

CERTIFIED MAIL - RETURN RECEIPT REQUEST
GRAMERCY GROUP INC.
3000 Burns Avenue
Wantagh, NY 11793

RE: FMS ID: S216-404A
E-PIN: 85014B0124001
DDC PIN: 8502014TR0003C
DEMOLITION OF DSNY FACILITIES
AT GANSEVOORT PENINSULA
(MARINE TRANSFER STATION) -
BOROUGH OF MANHATTAN
NOTICE OF AWARD

Dear Contractor:

You are hereby awarded the above referenced contract based upon your bid in the amount of \$29,611,000.00 submitted at the bid opening on June 10, 2014. Within ten (10) days of your receipt of this notice of award, you are required to take the actions set forth in Paragraphs (1) through (3) below. For your convenience, attached please find a copy of Schedule A of the General Conditions to the Contract, which sets forth the types and amounts of insurance coverage required for this contract.

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



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

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

Sincerely,

John Goddard

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

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

PROJECT ID: S216-404A

**Demolition of DSNY Facilities at Gansevoort Peninsula
4 Bloomfield Street
Manhattan 10004**

Name of Bidder: Gramercy Group, Inc.

Date of Bid Opening: June 10, 2014

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

Place of Business of Bidder: 3000 Burns Avenue, Wantagh, NY 11793

Bidder's Telephone Number: 516-876-0020 Bidder's Fax Number: 516-876-0021

Bidder's Email Address: rpeterson@gramercyusa.com

Residence of Bidder (If Individual): _____

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

Names of Partners

Residence of Partners

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

Organized under the laws of the State of New York

Name and Home Address of President: Vincent Parziale
15 Cedar Road, Belle Terre, NY 11777

Name and Home Address of Secretary: Frank Castiglia
1754 Remsen Avenue, Merrick, NY 11556

Name and Home Address of Treasurer:

Unit Price Schedule

Unit Price items: The items of work set forth in the Schedule below shall be performed by the contractor on a unit price basis for additional work. Such items of work shall be performed by the contractor only as directed in writing by the Commissioner.

The unit price for the items of work in the Schedule below are for EXTRA WORK ONLY i.e., work which is above and beyond that described in the Drawings and Specifications.

The bidder shall submit prices for all the items of work in the Schedule below. The bidder shall insert the total sum for all unit price items on the Bid Form, Item C - Allowance for Unit Prices. The unit price bid for each item shall include all costs and expense for the item, i.e., labor, material, overhead and profit. Quantities shown are approximate and for bid comparison purposes only. Actual amounts to be determined when the work is performed.

CSI #	Item #	Item Description	Quant.	Units	Unit Price	Total
026100	1	Difference between Transport and Disposal of Non-Hazardous Petroleum Contaminated Soil/Fill and Non-Hazardous Contaminated Soil/Fill	2000	TON	\$4.20	\$8,400.00
026100	2	Difference between Transport and Disposal of Hazardous Waste Soil/Fill and Non-Hazardous Contaminated Soil/Fill	9000	TON	\$112.00	\$1,008,000.00
265600	3	Furnish and install 25' light pole with LED fixture, solar panel, battery & foundation	1	EA	\$5,250.00	\$5,250.00
316213	4	Furnished and install Steel H-Piles	3374	LF	\$158.00	\$533,092.00
316213	5	Furnish and install Precast-Prestressed Concrete Piles	1960	LF	\$268.00	\$525,280.00

Total Amount of Unit Price Work

\$2,080,022.00*

* Insert Total amount of Unit Price Work on line C of Bid Form

Note: All quantities are approximate

BID FORM

PROJECT ID: S216-404A

TOTAL BID PRICE: In the space provided below, the Bidder shall indicate the total bid price in figures.

A. LUMP SUM PRICE - Total price for all labor and material for all required work, excluding items (B) and (C) set forth below. Total Price shall include all costs and expenses, i.e. labor, material overhead and profit for all the Work, described and shown in the drawings and specifications.

Total Price for Material Sold and Delivered

Total Price For Labor

\$ 12,482,934.20 +

\$ 14,798,043.80

Total Price for Item A= \$27,280,978.00

6/10/14
\$250,000.00

B. ALLOWANCE for Incidental Asbestos Abatement (Section 028013 of the Specifications)

C. AMOUNT for Unit Prices (from page 13-1) for extra work items

\$2,080,022.00

TOTAL BID PRICE (Add A + B + C)
(a/k/a BID PROPOSAL)

\$ 29,611,000.00

BIDDER'S SIGNATURE AND AFFIDAVIT

* SUBCONTRACTOR IDENTIFICATION: You MUST complete and submit the form entitled "Bidder's Identification of Subcontractors" (page 17) at the time you submit your bid. You must submit this form in a separate, sealed envelope (BID ENVELOPE #2). In the event an award of contract is not made to the Bidder, the Bidder hereby authorizes the Agency to shred the form entitled "Bidder's Identification of Subcontractors". Yes No

Bidder: Gramercy Group, Inc.

By: Vincent Parziale (Signature of Partner or corporate officer)

Attest: Frank Castiglia Secretary of Corporate Bidder (Corporate Seal)

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

BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDERS 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 BIDDERS 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

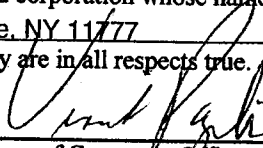
AFFIDAVIT WHERE BIDDERS IS A CORPORATION

STATE OF NEW YORK, COUNTY OF NASSAU ss:

Vincent Parziale

_____ 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 15 Cedar Road, Belle Terre, NY 11777
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
9th day of June, 2014



Notary Public

JUDITH A. AIELLO
Notary Public, State of New York
No. 01A16080641
Qualified in Suffolk County
Commission Exp. September 16, 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: Gramercy Group, Inc.
Address: 3000 Burns Avenue
City: Wantagh State: New York Zip Code: 11793

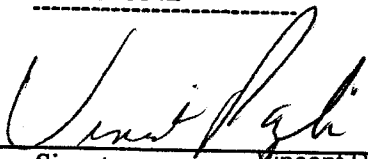
CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

- A - Individual or Sole Proprietorship *
SOCIAL SECURITY NUMBER

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

- C - Corporation
EMPLOYER IDENTIFICATION NUMBER

13-3546842

By: 
Signature: Vincent Parziale

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.

BIDDER'S IDENTIFICATION OF SUBCONTRACTORS

Project ID: S216-404A

SUBMISSION: In addition to its Bid (Bid Envelope # 1), the Bidder must, at the time of the bid, complete and submit this form in a separate, sealed envelope (Bid Envelope # 2). To complete this form, the Bidder must identify the subcontractors it intends to use for the work listed below, as well as the dollar amount to be paid to each subcontractor. Failure to complete this form and submit it in a separate, sealed envelope will result in the disqualification of the bid as non-responsive.

The Bidder intends to use the following subcontractors. If the Bidder intends to do any of the work referenced below with its own forces, the Bidder should complete this form using its own name. If multiple subcontractors for any trade are proposed, Bidder may submit multiple copies of this form.

1. **PLUMBING CONTRACTOR:**

A Plus Water and Sewer Main

(Print Name)

Agreed Amount To Be Paid To Subcontractor: \$ 30,000.00

2. **ELECTRICAL CONTRACTOR:**

Redgrave Electrical Maintenance Inc.

(Print Name)

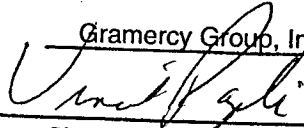
Agreed Amount To Be Paid To Subcontractor: \$ 150,000.00

BIDDER'S SIGNATURE: The Bidder must sign this form in the space provided below:

Name of Bidder:

Gramercy Group, Inc.

By:



Signature of Partner or Corporate Officer

Print Name:

Vincent Parziale

Title:

President

Qualification Form

Project ID: S216-404A

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: PLEASE SEE ATTACHED LIST

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 work completed: _____

Was the work performed as a prime or a subcontractor: _____

Amount of Contract: _____

Date of Completion: _____

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 work completed: _____

Was the work performed as a prime or a subcontractor: _____

Amount of Contract: _____

Date of Completion: _____

CURRENT AND PAST ASBESTOS ABATEMENT & DEMOLITION PROJECTS

Name of Project: Glenwood Power Station
Location of Project: Shore Road, Glenwood, NY
Owner: National Grid (KeySpan)
Dollar (\$) Value: \$16,193,340.00
Description of Work: Asbestos Abatement & full Demolition of 775,000 sf Power Plant, concrete Silos, tunnels, chimneys, asphalt removal & hazardous material remediation
Contact Person: Gary Gisonda Telephone: 516-545-3692
Project Dates: October 2012 - Present

Name of Project: JFK – DELTA Terminal 3 & Building 80
Location of Project: JFK Airport, Queens, NY
Owner: DELTA Airlines / Port Authority NY and NJ
Dollar (\$) Value: \$30,000,000.00
Description of Work: Complete asbestos abatement of 1,000,000 SF terminal including 660,000 SF of Friable Spray On Fireproofing, and Misc. ACM. Demolition includes the dismantlement of the Former Pan Am World Port structure, and backfilling of 100,000 cy.
Contact Person: Peter Chorman Telephone: 646-484-0133
Project Dates: June 2013 - Current

Name of Project: Former Hartz Mountain Facility
Location of Project: 550 Frank E. Rodgers Blvd South, Harrison, New Jersey
Owner: I. Heller Construction
Dollar (\$) Value: \$14,800,000.00
Description of Work: Complete asbestos abatement, demolition and soil remediation. Consisted of 10 buildings totaling 1,200,000 SF, Misc. Asbestos, PCB contaminated concrete slabs and 30,000 CY of PCB contaminated soil.
Contact Person: Steve Pozza Telephone: 732-287-4880
Project Dates: March 2012 – September 2013

Name of Project: Macy's
Location of Project: Bayshore, NY
Owner: Westfield LLC
Dollar (\$) Value: \$8,100,000.00
Description of Work: Complete asbestos abatement, and partial demolition. Asbestos abatement included the removal of 300,000 SF of Spray On Fireproofing, 300,000 SF of Floor Tile and Misc. ACM. Demolition consisted of the hand separation from the existing active mall and removal of 200,000 SF of structure.
Contact Person: Jerry White Telephone: 419-971-6025
Project Dates: May 2012 – October 2012

Name of Project: Fortunoff's
Location of Project: Wayne Town Center, New Jersey
Owner: Vornado Realty Trust
Dollar (\$) Value: \$2,995,000.00
Description of Work: Interior demolition of 1 ½ story 300,000 sf former Fortunoff's Bldg.
Contact Person: Eric Dinenberg Telephone: 201-587-1000
Project Dates: March 2012 to Oct. 2012

Name of Project: JCMUA Sedimentation Basin
Location of Project: Route 440, Jersey City, NJ
Owner: Jersey City Redevelopment Agency
Dollar (\$) Value: \$988,450.00
Description of Work: Asbestos abatement, demolition and concrete crushing of the former JCMUA Sedimentation Basin; Structural demolition of approximately 75,000 square feet.
Contact Person: Mary Patricia Noonan Telephone: 201-547-5810
Project Dates: December 2011 to May 2012

Name of Project: Brooklyn Navy Yard Bldgs. 128, 130 & 30
Location of Project: Brooklyn, NY
Owner: Brooklyn Navy Yard Development Corp.
Dollar (\$) Value: \$563,011.00
Description of Work: Asbestos abatement, hazardous materials remediation and selective interior demolition of Buildings 128, 123 and 28 located at the Brooklyn Navy Yard. Asbestos abatement of materials such as pipe insulation, floor tile and window caulking
Contact Person: James Corley Telephone: 718-907-5942
Project Dates: November, 2011 to February 2012

Name of Project: Former Avis Building
Location of Project: Garden City, NY
Owner: Equity One, Inc.
Dollar (\$) Value: \$4,702,270.00
Description of Work: Asbestos abatement of approximately 180,000 square feet of ACM spray on fireproofing. Structural demolition of approximately 500,000 square feet of buildings, hazardous remediation
Contact Person: Allan Brot Telephone: 212-796-1742
Project Dates: November, 2010 to February 2012

Name of Project: New Meadowlands Stadium
Location of Project: East Rutherford, NJ
Owner: NJ Sports & Exposition Authority
Dollar (\$) Value: \$16,036,210.00
Description of Work: Crane pick Escalator removal at Gate B; Selective Site Demolition/Excavation, Remediation & disposal of Contaminated Soil in lots 13 & 17 At Giant's Stadium
Contact Person: Tom Webb Telephone: 201-559-1400
Project Dates: July, 2007 to January 2010

Name of Project: New Meadowlands Stadium – Giant's Stadium
Location of Project: East Rutherford, NJ
Owner: NJ Sports & Exposition Authority
Dollar (\$) Value: \$10,221,900.00
Description of Work: Asbestos Abatement & Demolition of Giant's Stadium
Contact Person: Tom Webb Telephone: 201-559-1400

Project Dates: March 2010 to August 2010

Name of Project: Madison Yards – Eastside Access

Location of Project: Vesey & Church St; NYC, NY

Owner: MTA Capital Construction

Dollar (\$) Value: \$38,983,112.00

Description of Work: Demo & removal of rail, ballast & other railroad equip, below slab drainage, crash walls, replacement of upper level track drainage, lead paint removal, bring site to final grade

Contact Person: Rudy Batista Telephone: 212-736-4444

Project Dates: Jan. 2009 to April 2011

Name of Project: Former L. Mendel Rivers Federal Building

Location of Project: 334 Meeting St; Charleston, SC

Owner: Dewberry 334 Meeting Street, LLC

Dollar (\$) Value: \$1,541,000.00

Description of Work: Asbestos Abatement & Interior Demolition of a 100,000 + sf bldg..

Contact Person: Charles Rea Telephone: 404-888-7978

Project Dates: March 2011 to

Name of Project: JA Farley Post Office

Location of Project: 33rd Street & 8th Avenue., New York, NY

Owner: Empire State Development Corp.

Dollar (\$) Value: \$3,724,509.00

Description of Work: 250,000 sf of Asbestos Abatement of a 1,250,000.00 sf Bldg. & selective demolition to retrofit new facility for the postal employees

Contact Person: Joseph Burkard Telephone: 212-803-3262

Project Dates: Jan. 2010 to Aug. 2010

Name of Project: Creedmoor, Bldg. 74

Location of Project: 80-45 Winchester Blvd; Queens Village, NY

Owner: ACMH

Dollar (\$) Value: \$1,821,000.00

Description of Work: Asbestos Abatement & Interior Demolition of a 1,000,000 + sf bldg.

Contact Person: Peter Mulhall from Aurora Contractors Telephone: 631-981-3785

Project Dates: June 2009 to Nov. 2010

Name of Project: NYC HPD Emergency Work

Location of Project: Various locations in Manhattan and Bronx Counties

Owner: NYC Department of Housing Preservation and Development

Dollar (\$) Value: \$4,000,000.00

Description of Work: Emergency Asbestos Abatement and/or full interior demolition of buildings on an on-call basis including emergency cleanup of Crane Collapse

Contact Person: John Spoto Telephone: 212-863-7791

Project Dates: August 2006 to July 2008

Name of Project: WTC Eastside Basement

Location of Project: Vesey & Church Streets, NYC, NY

Owner: The Port Authority of NY & NJ

Dollar (\$) Value: \$3,731,800.00

Description of Work: Excavation & removal of asbestos containing debris

Contact Person: Robert Coyne Telephone: 917-560-5364

Project Dates: Sept. 2006 to Feb. 2007

Name of Project: Drake Hotel
Location of Project: 440 Park Ave; NYC, NY
Owner: McGraw Hudson
Dollar (\$) Value: \$6,165,887.00
Description of Work: Asbestos abatement and demolition of a 27 story hotel
Contact Person: Jason Adams 212-554-5900
Project Dates: Nov. 2006 to January 2008

Name of Project: Hicksville Parking Garage
Location of Project: Duffy Avenue, Hicksville, NY
Owner: Town of Oyster Bay
Dollar (\$) Value: \$1,892,453.00
Description of Work: Abatement & complete demolition of existing 4 story Parking Garage
Contact Person: Paul Johnson-Liro Telephone: 516-965-6218
Project Dates: August 2008 to June 2009

Name of Project: Former EDO Plant/New Tanger Mall
Location of Project: 455 Commack Road, Deer Park, NY
Owner: BDG Construction Corp.
Dollar (\$) Value: \$4,740,000.00
Description of Work: Asb. Abatement, Hazardous Material Remediation & Full Demolition of 800,000 sf plant & outer trailers
Contact Person: Chris Pirraglia Telephone: 516-921-0800
Project Dates: Sept. 2006 to Feb. 2007

Name of Project: Former BICC Cable Co.
Location of Project: One Point St., Yonkers, NY
Owner: Blackacres Partners OPS, LLC
Dollar (\$) Value: \$18,816,301.00
Description of Work: Asb. Abatement & Demolition of approx. 900,000 sf 4 story bldg. Incl PCB's, Tank Removal & 30,000 tons of hazardous/non-hazardous contaminated soil remediation, sheeting, dewatering/treatment of water and backfilling
Contact Person: Debra Rothberg Telephone: 212-714-1212
Project Dates: July, 2005 to November, 2012

Name of Project: Former Cerro Wire Plant
Location of Project: Robbins Lane, Syosset, NY
Owner: Taubman/Skanska
Dollar (\$) Value: \$6,729,613.96
Description of Work: Asbestos Abatement and Full Demolition of 350,000 sf plant, mass grading, Contaminated Soil Remediation and Water Main Installation
Contact Person: Frank Falciani of Skanska USA Building Inc. Telephone: 973 334-5300
Project Dates: Feb. 2004 to May 2005

Name of Project: 677 11th Avenue
Location of Project: 677 11th Ave; NYC., NY
Owner: Rockrose Construction
Dollar (\$) Value: \$574,400.00
Description of Work: Asb. Abatement & full Demolition of 4 story bldg. incl basement
Contact Person: Frank Vasta Telephone: 212-901-1754
Project Dates: June 2008 to Dec. 2008

Name of Project: Fulton Street Transit Center
Location of Project: Fulton Street & Broadway, NY, NY
Owner: MTA New York City Transit
Dollar (\$) Value: \$7,979,250.00
Description of Work: Asbestos/Lead Abatement, Remediation & Full Deconstruction of 5 Buildings
Contact Person: Bharat Kothari Telephone: 646-252-3489
Project Dates: Jan. 2007 to Dec. 2007

Name of Project: Maiden Lane
Location of Project: 151 & 161 Maiden Lane, NYC, NY
Owner: The Pioneers Company
Dollar (\$) Value: \$1,018,234.00
Description of Work: Asbestos Abatement & full demolition of a 6 story factory and 1 story Warehouse, removal of boilers and site work
Contact Person: Charles Fino/CHF Consulting Telephone: 212-686-1914
Project Dates: July 2007 to April 2008

Name of Project: Pepsi Cola and associated buildings
Location of Project: 46-00 5th St., L.I.C., NY
Owner: Queens West Development Corp.
Dollar (\$) Value: \$5,600,000.00
Description of Work: Full Demolition, Asbestos Abatement of 600,000 sf Buildings and removal of (8) 165' tall concrete Silos
Contact Person: Larry Ford of Empire Develop. Corp. Telephone: 718-786-2034
Project Dates: Sept. 2003 to Dec. 2008

Name of Project: Brooklyn College Plaza
Location of Project: Bedford Ave., Brooklyn, NY
Owner: Dormitory Authority, State of New York
Dollar (\$) Value: \$5,696,534.06
Description of Work: Asb. Abate., hazardous remediation, full demo & site restoration of 3 story, 270,000 sf bldg
Contact Person: Frank Yozzo of Turner Construction Telephone: 212-229-6351
Project Dates: Aug. 2004 to Oct. 2006

Name of Project: John Jay College
Location of Project: 524 W. 59th Street, New York, NY
Owner: Dormitory Authority, State of New York
Dollar (\$) Value: \$2,124,700.00
Description of Work: Asbestos Abatement & full demolition of 2 story, 100,000 sf building
Contact Person: Scott Vambucco of Turner Construction Telephone: 212-229-6429
Project Dates: May 2006 to Oct. 2007

Name of Project: Harlem Hospital
Location of Project: 506 Lenox Ave., New York, NY
Owner: DASNY
Dollar (\$) Value: \$2,962,000.00
Description of Work: Asbestos Abatement and full demo of 6 story, 85,000 sf OPD Bldg.
Contact Person: Peter Jackson of DASNY Telephone: 212-273-5000
Project Dates: Dec. 2005 to Dec. 2006

Name of Project: Tribeca – Restaurant Tower
Location of Project: West St., Washington & Debosses Streets, NYC, NY
Owner: Tribeca Construction LLC.
Dollar (\$) Value: \$2,122,464.00
Description of Work: Asb. Abatement & full Demolition of 5 buildings (warehouses),
Additional Soil Removal & Removal of Hazardous Materials
Contact Person: William Wallerstein Telephone: 212-333-3353
Project Dates: April 2006 to April 2007

Name of Project: 14, 16, 18, 20 E. 53rd St. & 510 Madison Ave.
Location of Project: East 53rd St. & Madison Ave., New York, NY
Owner: McGraw Hudson Construction
Dollar (\$) Value: \$2,585,000.00
Description of Work: Asb. Abatement & full Demolition of 4 bldgs from 6 – 18 stories &
Remediation of Hazardous Materials
Contact Person: David Dods Telephone: 212-557-0099
Project Dates: Sept. 2006 to Feb. 2007

Name of Project: U.S. Mission to the United Nations
Location of Project: United Nations Plaza, New York, NY
Owner: U.S. General Services Administration
Dollar (\$) Value: \$2,168,850.00
Description of Work: Environmental Remediation of hazardous materials including Asbestos
abatement, Full Demolition of 12 story office Bldg. incl. 16 story mechanical Section.
Contact Person: Jim O'Donnell of Jacobs Engineering Telephone: 212 268-1500
Project Dates: June 2004 to May 2005

Name of Project: Van Nest School
Location of Project: 1640 Bronxdale Ave; Bronx, NY
Owner: NYC SCA/Civic Builders, Inc.
Dollar (\$) Value: \$1,586,991.00
Description of Work: Asbestos Abatement, Full Demolition of Building & Tank Removal
Contact Person: Jill Crawford, Civic Builders Telephone: 212-571-7260
Project Dates: Jan. 2008 to July 2008

Name of Project: Former Daily News Print Shop
Location of Project: 55-02 2nd St., L.I.C., NY
Owner: Queens West Development Corp.
Dollar (\$) Value: \$1,400,000.00
Description of Work: Demolition, Hazardous Material Remediation and Asbestos Abatement
of Approx. 100,000 sf Bldg.
Contact Person: Larry Ford of Empire Develop. Corp. Telephone: 718-786-2034
Project Dates: Jan. 2003 to Jan. 2004

Name of Project: Yale and Lowenstein Buildings

Location of Project: 608 W 40th St. & 460 12th Ave., NYC, NY

Owner: Queens West Development Corp.

Dollar (\$) Value: \$1,025,495.00

Description of Work: Demolition, Hazardous Material Remediation and Asbestos Abatement of 2 Bldgs.

Contact Person: Larry Ford of Empire Develop. Corp. Telephone: 718-786-2034

Project Dates: August 2006 to April 2007

Name of Project: Endeavor School, 510 Waverly Avenue, Phase 1

Location of Project: 510 Waverly Ave; Brooklyn, NY

Owner: NYC SCA/Civic Builders, Inc.

Dollar (\$) Value: \$429,843.00

Description of Work: Asbestos Abatement & complete demolition of existing 2 & 3 story & abatement of 6 story structure

Contact Person: Annie Churchill, Civic Builders Telephone: 212-571-7260

Project Dates: Oct. 2007 to May 2008



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

COOPERATION'S AND BENEFITS AGREEMENT

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St. & Gansevoort St.

Bidder: Gramercy Group, Inc.

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
Contract 1 - General Construction Work								
<u>Division 1</u>	<u>General Requirements</u>							
10000	Mobilization							
	Temporary Power/ Electric	1	LS	\$0.00	\$0.00	\$300,000.00	\$300,000.00	\$300,000.00
	Temporary Heat	1	LS	\$90,750.00	\$90,750.00	\$211,750.00	\$211,750.00	\$302,500.00
	Site Security	1	LS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
		17520	HRS	\$0.00	\$0.00	\$18.15	\$317,988.00	\$317,988.00
	Subtotal							\$920,488.00
16000	Summary (Included w/ General Conditions)							
<u>Division 2</u>	<u>Existing Conditions</u>							
20010	Summary of Environmental and Incinerator Decommissioning Work							
	Sealed Incinerator Rooms interior cleaning pressure wash all floors, walls and ceilings throughout the sealed incinerator rooms, removal and disposal of residual wastes	31,500	SF	\$3.63	\$114,345.00	\$6.05	\$190,575.00	\$304,920.00
	Subtotal							\$304,920.00
20020	Environmental Health and Safety (Included w/ General Conditions)							
20030	Emergency Spill Control (Included w/ 026500 & 026500.10)							
20100	Protection of Existing Facilities (Included w/ 20350)							
20350	Maintenance and Protection of Traffic							
	Flagger @ site entrance	4160	HRS	\$0.00	\$0.00	\$14.52	\$60,403.20	\$60,403.20
	Crossing Guard	1000	HRS	\$0.00	\$0.00	\$14.52	\$14,520.00	\$14,520.00
	Subtotal							\$74,923.20



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A
Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
24100	Bilding and Debris Removal							
	Remove existing							
	Snow plow storage racks (salvage if possible)	400	LF	\$48.40	\$19,360.00	\$72.60	\$29,040.00	\$48,400.00
	Trailer and trailer container	2	EA	\$605.00	\$1,210.00	\$1,210.00	\$2,420.00	\$3,630.00
	Aluminum Movable guard shed	1	EA	\$302.50	\$302.50	\$605.00	\$605.00	\$907.50
	Building demolition and debris removal							
	Salt Shed							
	Interior demolition complete up to 5'-0" below the ground level	332000	CF	\$0.00	\$0.00	\$0.12	\$40,172.00	\$40,172.00
	Foundation wall	537	CY	\$36.91	\$19,817.99	\$60.50	\$32,488.50	\$52,306.49
	Foundation footing	565	CY	\$36.91	\$20,851.33	\$60.50	\$34,182.50	\$55,033.83
	Foundation slab 11" thick	15840	SF	\$1.34	\$21,274.70	\$6.05	\$95,832.00	\$117,106.70
	Marine Transfer Station							
	Interior demolition complete up to bottom of pile caps	660000	CF	\$0.24	\$159,720.00	\$1.51	\$998,250.00	\$1,157,970.00
	Wooden deck at road level	1260	SF	\$17.24	\$21,725.55	\$51.73	\$65,176.65	\$86,902.20
	Concrete deck at road level	22000	SF	\$0.67	\$14,641.00	\$6.05	\$133,100.00	\$147,741.00
	Pier deck at pilecap level	10128	SF	\$2.72	\$27,573.48	\$8.17	\$82,720.44	\$110,293.92
	Fender pier deck at pilecap level	6650	SF	\$12.71	\$84,488.25	\$38.12	\$253,464.75	\$337,953.00
	Railing on the wooden deck	380	LF	\$11.80	\$4,483.05	\$35.39	\$13,449.15	\$17,932.20
	Pile caps- Small	81	EA	\$108.90	\$8,820.90	\$4,247.10	\$344,015.10	\$352,836.00
	Pile caps- Medium	26	EA	\$145.20	\$3,775.20	\$41,599.80	\$1,081,594.80	\$1,085,370.00
	Pile caps- Large	5	EA	\$242.00	\$1,210.00	\$49,803.60	\$249,018.00	\$250,228.00
	Cutoff piles	820	EA	\$12.10	\$9,922.00	\$37.51	\$30,758.20	\$40,680.20
	Trailer #1 46'-0" x 12'-6"	1	EA	\$1,936.00	\$1,936.00	\$7,986.00	\$7,986.00	\$9,922.00
	Trailer #2 56'-0" x 12'-6"	1	EA	\$1,936.00	\$1,936.00	\$7,986.00	\$7,986.00	\$9,922.00
	Trailer #3 56'-0" x 12'-6"	1	EA	\$1,936.00	\$1,936.00	\$7,986.00	\$7,986.00	\$9,922.00
	Destructor Plant							
	Interior demolition of complete up to 5'-0" below the ground level	1800000	CF	\$0.12	\$217,800.00	\$1.49	\$2,678,940.00	\$2,896,740.00
	Foundation slab	37000	SF	\$7.56	\$279,812.50	\$9.68	\$358,160.00	\$637,972.50
	Railing on roof	600	LF	\$0.00	\$0.00	\$1.21	\$726.00	\$726.00
	Subtotal							\$7,470,667.53



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
24113.23	Hydraulic Systems and Fuel Oil Pipe Removal							
	Remove existing							
	Fueling station	1	LS	\$1,210.00	\$1,210.00	\$6,050.00	\$6,050.00	\$7,260.00
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Hydraulic lift equipment, portable and bolted (drain, clean & dispose of hydraulic lift equipment)	1	LS	\$6,050.00	\$6,050.00	\$4,840.00	\$4,840.00	\$10,890.00
	Summary of environmental and Incinerator decommissioning work							
	Sealed Incinerator rooms							
	Hydraulic hoist equipment/overhead crane (drain clean and dispose hydraulic equipment)	1	LS	\$2,420.00	\$2,420.00	\$2,420.00	\$2,420.00	\$4,840.00
	Subtotal							\$22,990.00
24119.16	Interior Demolition							
	Plumbing Demo							
	Destructor Plant							
	Remove Fire pump	2	EA	\$0.00	\$0.00	\$302.50	\$605.00	\$605.00
	Remove backflow preventor	1	EA	\$0.00	\$0.00	\$302.50	\$302.50	\$302.50
	Remove oil interceptor	2	EA	\$0.00	\$0.00	\$605.00	\$1,210.00	\$1,210.00
	Remove floor drain	22	EA	\$0.00	\$0.00	\$242.00	\$5,324.00	\$5,324.00
	Cap Pipe	1	LS	\$605.00	\$605.00	\$1,815.00	\$1,815.00	\$2,420.00
	Remove Roof drain	15	EA	\$0.00	\$0.00	\$60.50	\$907.50	\$907.50
	Garage							
	Remove HW Heater	1	EA	\$0.00	\$0.00	\$242.00	\$242.00	\$242.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Remove gas booster	1	EA	\$0.00	\$0.00	\$302.50	\$302.50	\$302.50
	Remove manholes	3	EA	\$0.00	\$0.00	\$605.00	\$1,815.00	\$1,815.00
	Remove pumps	10	EA	\$0.00	\$0.00	\$302.50	\$3,025.00	\$3,025.00
	Cap Pipe	1	LS	\$605.00	\$605.00	\$1,815.00	\$1,815.00	\$2,420.00
	Remove floor drain	6	EA	\$0.00	\$0.00	\$242.00	\$1,452.00	\$1,452.00
	Remove roof drain	4	EA	\$0.00	\$0.00	\$60.50	\$242.00	\$242.00
	MTS							
	Remove pipe	1200	LF	\$0.00	\$0.00	\$2.42	\$2,904.00	\$2,904.00
	Cap the pipe	1	LS	\$605.00	\$605.00	\$1,815.00	\$1,815.00	\$2,420.00
	Remove sewage ejector	1	EA	\$0.00	\$0.00	\$1,815.00	\$1,815.00	\$1,815.00
	Remove area drain	3	EA	\$0.00	\$0.00	\$242.00	\$726.00	\$726.00
	Remove HWH	1	EA	\$0.00	\$0.00	\$302.50	\$302.50	\$302.50
	Remove plumbing fixtures	6	EA	\$0.00	\$0.00	\$60.50	\$363.00	\$363.00
	Remove air compressor	1	EA	\$0.00	\$0.00	\$60.50	\$60.50	\$60.50
	Remove domestic water heater	1	EA	\$0.00	\$0.00	\$242.00	\$242.00	\$242.00
	HVAC Demolition							
	Destructor Plant							
	Remove unit heaters	16	EA	\$0.00	\$0.00	\$60.50	\$968.00	\$968.00
	Remove vent pipe	1	LS	\$0.00	\$0.00	\$3,630.00	\$3,630.00	\$3,630.00
	Remove Duct	1	LS	\$0.00	\$0.00	\$3,630.00	\$3,630.00	\$3,630.00
	Remove boiler, piping, valves, breeching and controls	1	EA	\$0.00	\$0.00	\$6,050.00	\$6,050.00	\$6,050.00
	Remove exhaust fan	2	EA	\$0.00	\$0.00	\$60.50	\$121.00	\$121.00
	Garage							
	Remove unit heaters	10	EA	\$0.00	\$0.00	\$60.50	\$60.50	\$60.50
	Remove refrigeration pipe	1	LS	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Remove make up air unit	1	EA	\$0.00	\$0.00	\$907.50	\$907.50	\$907.50
	Remove ATC panel	1	EA	\$0.00	\$0.00	\$592.90	\$592.90	\$592.90
	Remove HVU unit	1	EA	\$0.00	\$0.00	\$438.02	\$438.02	\$438.02
	Remove Duct	300	LF	\$0.00	\$0.00	\$3.63	\$1,089.00	\$1,089.00
	Remove exhaust fan	4	EA	\$0.00	\$0.00	\$60.50	\$242.00	\$242.00
	Remove monitor panel	1	EA	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Remove AC Unit	10	EA	\$0.00	\$0.00	\$242.00	\$2,420.00	\$2,420.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
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CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	MTS							
	Remove unit heaters	10	EA	\$0.00	\$0.00	\$605.00	\$605.00	\$605.00
	Remove HVAC Unit	10	EA	\$0.00	\$0.00	\$438.02	\$4,380.20	\$4,380.20
	Remove Duct	1	LS	\$0.00	\$0.00	\$1,089.00	\$1,089.00	\$1,089.00
	Cap the duct	1	LS	\$0.00	\$0.00	\$1,815.00	\$1,815.00	\$1,815.00
	Remove exhaust fan	4	EA	\$0.00	\$0.00	\$60.50	\$242.00	\$242.00
	Remove window AC Unit	10	EA	\$0.00	\$0.00	\$242.00	\$2,420.00	\$2,420.00
	Subtotal							\$62,220.62
24119.19	Electric System Dismantlement during Abatement Phase							
	Site & Building Electrical Demolition							
	Existing Incoming Services- Beyond 5' of the Building line	5	LF	\$0.00	\$0.00	\$1,815.00	\$9,075.00	\$9,075.00
	Distribution Equipment Removal							
	Switchboard removal-4000A	1	EA	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Misc. Electrical panel removal @ 1st floor	2	LS	\$0.00	\$0.00	\$605.00	\$1,210.00	\$1,210.00
	Pull box & Enclosure removal	2	EA	\$0.00	\$0.00	\$605.00	\$1,210.00	\$1,210.00
	Transformer	1	EA	\$0.00	\$0.00	\$2,420.00	\$2,420.00	\$2,420.00
	Disconnect switch-800A	6	EA	\$0.00	\$0.00	\$302.50	\$1,815.00	\$1,815.00
	Disconnect switch	3	EA	\$0.00	\$0.00	\$302.50	\$907.50	\$907.50
	Distribution Feeder Removal							
	1"-5" conduit removal	300	LF	\$0.00	\$0.00	\$12.10	\$3,630.00	\$3,630.00
	Branch Circuit Removal [Per note #22-E001]							
	3#12-3/4" C Removal	100	LF	\$0.00	\$0.00	\$12.10	\$1,210.00	\$1,210.00
	4#4/0-2 1/2"- Panel Feeders	100	LF	\$0.00	\$0.00	\$12.10	\$1,210.00	\$1,210.00
	Distribution Equipment Demo @ Garage Floors (1st & 2nd)							
	Conduits removal	1	LS	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Switchboard removal	3	EA	\$0.00	\$0.00	\$60.50	\$181.50	\$181.50
	Panel board removal	3	EA	\$0.00	\$0.00	\$60.50	\$181.50	\$181.50
	Pull box removal	3	EA	\$0.00	\$0.00	\$60.50	\$181.50	\$181.50
	Disconnect Switch Removal	3	EA	\$0.00	\$0.00	\$60.50	\$181.50	\$181.50



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACTORS' PRO BREAKDOWN FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Distribution Equipment Demo @ Destructor Floor (2nd)							
	Conduits removal	1	LS	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Switchboard removal	2	EA	\$0.00	\$0.00	\$60.50	\$121.00	\$121.00
	Panel board removal	2	EA	\$0.00	\$0.00	\$60.50	\$121.00	\$121.00
	Distribution Equipment Demo @ Pier Floor (2nd)							
	Conduits removal	1	LS	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Switchboard removal	2	EA	\$0.00	\$0.00	\$60.50	\$121.00	\$121.00
	Panel board removal	2	EA	\$0.00	\$0.00	\$60.50	\$121.00	\$121.00
	Disconnect Switch Removal	2	EA	\$0.00	\$0.00	\$60.50	\$121.00	\$121.00
	Distribution Equipment Demo @ Salt Shed Floor (1st)							
	Conduits removal	1	LS	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Panel board removal	1	EA	\$0.00	\$0.00	\$60.50	\$60.50	\$60.50
	Misc. Time & Material							
	Temporary Light and Power for all areas							
	Subtotal							\$30,129.00
25100	Building Decontamination (Included w/ 025129)							
25129	Ash/ Dust/ Debris Removal and Material Decontamination							
	Summary of environmental and Incinerator decommissioning work							
	Sealed incinerator rooms							
	ACM/Metals Hazardous waste brick, ash and debris incinerator area miscellaneous debris cleanup removal and disposal of ash and debris located in furnaces, flues, dusts, boilers, equipment and floors throughout the incinerator area	1150	CY	\$907.50	\$1,043,625.00	\$665.50	\$765,325.00	\$1,808,950.00
	Subtotal	2300	CY	\$423.50	\$974,050.00	\$302.50	\$695,750.00	\$1,669,800.00
								\$3,478,750.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CORPORATION'S AND (B) REASONABLE FORTN

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St. & Gansevoort St.

Bidder: Gramercy Group, Inc.

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
25129.13	Sewer and Utility Cleanup							
	Remove existing							
	Sewer manhole removed to a depth 5'-0" and bottom slab puctured	6	EA	\$0.00	\$0.00	\$1,210.00	\$7,260.00	\$7,260.00
	Plug abandoned 3'-6" x 2'-4" sewer at manhole location							
	4'-0" x 2'-8" brick sewer	15	EA	\$0.00	\$0.00	\$6,050.00	\$90,750.00	\$90,750.00
	5'-0" x 3'-0" brick sewer	5	LF	\$0.00	\$0.00	\$302.50	\$1,512.50	\$1,512.50
	Sewer line from vault	15	LF	\$0.00	\$0.00	\$363.00	\$5,445.00	\$5,445.00
	Summary of environmental and incinerator decommissioning work	463	LF	\$0.00	\$0.00	\$7.87	\$3,641.50	\$3,641.50
	Sealed incinerator rooms							
	Purge and clean all on-site sewers	1	LS	\$0.00	\$0.00	\$90,750.00	\$90,750.00	\$90,750.00
	Existing storm pipe to be flushed and cleaned	300	LF	\$0.00	\$0.00	\$200.86	\$60,258.00	\$60,258.00
	Summary of environmental and incinerator decommissioning work							
	Sealed incinerator rooms							
	Purging and cleaning of all abandoned fuel oil line pumps, drain and clean all lines associated with abandoned boiler and furnaces	1	LS	\$0.00	\$0.00	\$121,000.00	\$121,000.00	\$121,000.00
	Reset grate elevation for inlets	6	EA	\$0.00	\$0.00	\$8,470.00	\$50,820.00	\$50,820.00
	Subtotal							\$431,437.00
26000	Contaminated Site Material and Waste Removal and Disposal							
	Environmental Health and Safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Remove all CFC containing equipment	1	LS	\$9,075.00	\$9,075.00	\$9,075.00	\$9,075.00	\$18,150.00
	Waste characterization sampling, laboratory analysis and consulting services	1	LS	\$0.00	\$0.00	\$18,150.00	\$18,150.00	\$18,150.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACTOR'S BID BREAKDOWN PERM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Summary of environmental and incinerator decommissioning work							
	Sealed incinerator rooms							
	Remove CFC containing equipment	1	LS	\$605.00	\$605.00	\$605.00	\$605.00	\$1,210.00
	Waste characterization sampling, laboratory analysis and consulting services	1	LS	\$121.00	\$121.00	\$121.00	\$121.00	\$242.00
	Subtotal							\$37,752.00
26100	Excavation and Removal of Contaminated Soil							
	Solid excavation Hazardous (*Non-Haz Contaminated Soil)	6000	CY	\$182.71	\$1,096,260.00	\$9.68	\$58,080.00	\$1,154,340.00
	Extra cost for carting away hazardous material from excavation assume 15%	Included Above						\$1,154,340.00
	Subtotal							\$1,154,340.00
26500	Removal of Underground Storage Tanks							
	Remove 275 to 4000 Underground storage tanks (15 total)	1	LS	\$11,495.00	\$11,495.00	\$25,894.00	\$25,894.00	\$37,389.00
	Subtotal							\$37,389.00
26500.1	Above Ground Storage Tank Removal and Disposal							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Propane Tanks (2 full, 8 empty)	10	EA	\$121.00	\$1,210.00	\$242.00	\$2,420.00	\$3,630.00
	Remove all propane tanks	1	LS	\$1,210.00	\$1,210.00	\$2,420.00	\$2,420.00	\$3,630.00
	Remove and dispose 275 to 550 gallon ASTs	1	LS	\$3,448.50	\$3,448.50	\$14,096.50	\$14,096.50	\$17,545.00
	Summary of environmental incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Remove ASTs (Purge, clean, remove & dispose of steel ASTs and piping	1	EA	\$605.00	\$605.00	\$605.00	\$605.00	\$1,210.00
	Subtotal							\$26,015.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
 Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
 Bidder: Gramercy Group, Inc.

CONTRACTORS BID MEASUREMENT FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
27100	Water Treatment System							
	Water Treatment System	1	LS	\$121,000.00	\$121,000.00	\$0.00	\$0.00	\$121,000.00
	Federal, state, city law, rule and/or regulation fees related to asbestos abatement	1	LS	\$14,520.00	\$14,520.00	\$0.00	\$0.00	\$14,520.00
	Subtotal							\$135,520.00
28120	Removal and Disposal of Heavy Metals Containing Material							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	High-Pressure sodium lights (transport & dispose)	126	Container	\$114.35	\$14,407.47	\$0.00	\$0.00	\$14,407.47
	Labor costs to collect and stage sodium lights	1	LS	\$0.00	\$0.00	\$1,360.04	\$1,360.04	\$1,360.04
	Halide lights (transport and dispose)	1	Container	\$6.05	\$6.05	\$0.00	\$0.00	\$6.05
	Labor costs to collect and stage halide lights	1	LS	\$0.00	\$0.00	\$169.40	\$169.40	\$169.40
	Mercury switches/gauges (transport and dispose)	1	Container	\$6.05	\$6.05	\$0.00	\$0.00	\$6.05
	Labor costs to collect and stage mercury items	1	LS	\$0.00	\$0.00	\$1.21	\$1.21	\$1.21
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	High-Pressure sodium lights (transport & dispose)	5	Container	\$272.25	\$1,361.25	\$0.00	\$0.00	\$1,361.25
	Labor costs to remove and stage halide lights	1	LS	\$0.00	\$0.00	\$169.40	\$169.40	\$169.40
	Halide lights (transport and dispose)	5	Container	\$272.25	\$1,361.25	\$0.00	\$0.00	\$1,361.25
	Labor cost to remove and stage halide lights	1	LS	\$0.00	\$0.00	\$169.40	\$169.40	\$169.40
	Mercury switches/gauges (transport and dispose)							
	Mercury switches/gauges (transport and dispose)	5	Container	\$272.25	\$1,361.25	\$0.00	\$0.00	\$1,361.25
	Labor Costs to remove and stage mercury items	1	LS	\$0.00	\$0.00	\$169.40	\$169.40	\$169.40
	Subtotal							\$20,542.17



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACTORS BID BREAKDOWN TABLE

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
28130	Removal of Chlorinated Fluorocarbons							
	Environmental health and safety							
	Environmental cleanup							
	M2, M5, Salt Shed, MTS							
	Fluorescent Lights - 8 ft long (4-light fixture, 2-light fixture+circular)	186	EA	\$3.25	\$605.41	\$10.96	\$2,039.04	\$2,644.46
	Fluorescent Lights - 4 ft long (4-light fixture, 2-light fixture)	405	EA	\$3.25	\$1,318.23	\$10.96	\$4,439.85	\$5,758.09
	Subtotal							\$8,402.54
28213	Asbestos Abatement							
	M2 Garage							
	Containment setup (Decon unit, negative air equipment and containment barriers)	1	LS	\$6,050.00	\$6,050.00	\$10,890.00	\$10,890.00	\$16,940.00
	Windows (Glazing and caulk)	258	EA	\$96.80	\$24,974.40	\$484.00	\$124,872.00	\$149,846.40
	Door Frames with caulk	15	EA	\$36.30	\$544.50	\$181.50	\$2,722.50	\$3,267.00
	Caulking	450	LF	\$9.98	\$4,492.13	\$49.87	\$22,439.39	\$26,931.51
	Roof base flashing	605	SF	\$4.50	\$2,723.23	\$22.48	\$13,601.49	\$16,324.72
	Roof Tar	240	SF	\$5.14	\$1,234.20	\$17.00	\$4,080.12	\$5,314.32
	Roof membrane	120	SF	\$3.63	\$435.60	\$11.34	\$1,360.52	\$1,796.12
	Pipe insulation	200	LF	\$27.53	\$5,505.50	\$91.81	\$18,362.96	\$23,868.46
	Floor tile and mastic	1020	SF	\$4.24	\$4,319.70	\$14.00	\$14,279.69	\$18,599.39
	Cove base and mastic	100	SF	\$4.24	\$423.50	\$13.60	\$1,360.04	\$1,783.54
	Air monitoring consultant	10	DAY	\$0.00	\$0.00	\$121.00	\$1,210.00	\$1,210.00
	Marine Transfer Station							
	Containment setup decon unit, negative air equipment and containment barriers	1	LS	\$6,050.00	\$6,050.00	\$10,890.00	\$10,890.00	\$16,940.00
	Windows (Glazing and caulk)	52	EA	\$251.08	\$13,055.90	\$837.32	\$43,540.64	\$56,596.54
	Door Frames with caulk	2	EA	\$170.01	\$340.01	\$340.01	\$680.02	\$1,020.03
	Roof vapor barrier	2500	SF	\$4.24	\$10,587.50	\$13.60	\$34,001.00	\$44,588.50
	Pipe insulation sleeves through wall penetration	4	SF	\$102.00	\$408.01	\$340.01	\$1,360.04	\$1,768.05
	Tar on wooden pier columns	450	SF	\$4.84	\$2,178.00	\$79.86	\$35,937.00	\$38,115.00
	Air monitoring consultant	30	DAY	\$0.00	\$0.00	\$121.00	\$3,630.00	\$3,630.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACTOR'S BID BREAKDOWN LOG

CONTRACT 1 - General Construction

DDC ID: S216-404A
Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Ramp							
	Containment setup decon unit, negative air equipment and containment barriers	1	LS	\$3,025.00	\$3,025.00	\$5,682.16	\$5,682.16	\$8,707.16
	Expansion joint caulk	10	LF	\$16.34	\$163.35	\$408.01	\$4,080.12	\$4,243.47
	Pipe insulation	350	LF	\$8.77	\$3,070.38	\$17.48	\$6,119.58	\$9,189.95
	Air monitoring consultant	5	DAY	\$0.00	\$0.00	\$121.00	\$605.00	\$605.00
	Destructor Plant							
	Containment setup decon unit, negative air equipment and containment barriers	1	LS	\$12,100.00	\$12,100.00	\$40,801.20	\$40,801.20	\$52,901.20
	Abatement dismantlement of furnaces, boilers and waste heat flue (refractory brick, mortar etc.)	27	CY	\$1,007.93	\$27,214.11	\$3,148.24	\$85,002.50	\$112,216.61
	Duct insulation	8150	SF	\$5.20	\$42,404.45	\$10.43	\$85,006.13	\$127,410.58
	Pipe Insulation	1440	LF	\$14.16	\$20,386.08	\$47.23	\$68,005.87	\$88,391.95
	Pipe Flange Gaskets	12	SF	\$85.00	\$1,020.03	\$170.01	\$2,040.06	\$3,060.09
	Canvas gasket at fan casing flange	10	SF	\$102.00	\$1,020.03	\$204.01	\$2,040.06	\$3,060.09
	Wire insulation	182000	LF	\$0.06	\$11,011.00	\$0.24	\$44,044.00	\$55,055.00
	Electric Backer Boards	950	SF	\$16.11	\$15,299.85	\$53.69	\$51,003.32	\$66,303.16
	Rope gasket at furnace door and feed hopper	440	SF	\$11.58	\$5,095.07	\$38.64	\$16,999.53	\$22,094.60
	Canvas Vibration damper	140	SF	\$91.80	\$12,852.38	\$306.01	\$42,841.26	\$55,693.64
	Canvas Vibration damper (* Air Monitoring)	60	DAY	\$0.00	\$0.00	\$121.00	\$7,260.00	\$7,260.00
	Spandrel Flashing Tar	8000	SF	\$5.09	\$40,752.80	\$17.00	\$136,004.00	\$176,756.80
	Subtotal							\$1,221,488.89
28313	Lead Hazard Management (Included w/ 028433)							
28416	Removal of Universal Waste (Included w/ 025100, 025139, 026500, 028120, & 028130)							



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACTOR'S BID PREPARATION FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
28433	Removal of PCB-Bearing Materials Environmental health and safety Environmental Cleanup M2, M5, Salt Shed, MTS PCBs containing equipment Suspected PCBs containing transformer (live) (clean wrap remove and dispose) PCBs containing light ballasts (transport and dispose of PCBs ballasts) Labor Costs to collect and stage PCB ballasts Remove and dispose of PCB containing caulk Summary of environmental and incinerator decommissioning work Sealed Incinerator Rooms Furnace conveyor gear and chain drives dispose of as PCB containing materials Furnace drives, motor and mounts remove and dispose of as PCB containing materials Transformers/PCBs containing equipment PCBs light ballasts (transport & dispose) Labor costs to remove and stage ballasts Clean petroleum/PCBs impacted surfaces Remove and dispose of all PCB containing caulk Subtotal	1 1 2 1 1	LS LS DRUM LS LS	\$726.00 \$726.00 \$363.00 \$0.00 \$0.00	\$726.00 \$726.00 \$726.00 \$0.00 \$0.00	\$0.00 \$0.00 \$0.00 \$8,160.24 \$13,600.40	\$0.00 \$0.00 \$0.00 \$8,160.24 \$13,600.40	\$726.00 \$726.00 \$726.00 \$8,160.24 \$13,600.40
28600	Removal of Drummed Waste and Decontamination Water Environmental health and safety Environmental Cleanup M2, M5, Salt Shed, MTS Truck Wash - 265 Gallon	5	EA	\$381.15	\$1,905.75	\$544.50	\$2,722.50	\$4,628.25
								\$277,857.14



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN TABLE

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A, and between Bloomfield St. & Gansevoort St.

Bidder: Gramercy Group, Inc.

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	55 Gallon drums (containing anti-freeze, motor oil, transmission oil, grease, cleaning products, etc.)	32	EA	\$121.00	\$3,872.00	\$0.00	\$0.00	\$3,872.00
	Steel cans (same contents as above and unknown)	32.5	EA	\$121.00	\$3,932.50	\$0.00	\$0.00	\$3,932.50
	Labor costs to stage and move containers	1	LS	\$0.00	\$0.00	\$13,599.19	\$13,599.19	\$13,599.19
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Est 100-gal empty storage vessel near electric room	2	EA	\$242.00	\$484.00	\$1,360.04	\$2,720.08	\$3,204.08
	Est 70-gal empty mixing vessel	2	EA	\$242.00	\$484.00	\$1,360.04	\$2,720.08	\$3,204.08
	55 gallon drums- contents unknown	8	EA	\$121.00	\$968.00	\$340.01	\$2,720.08	\$3,688.08
	Steel cans - contents unknown	30	EA	\$60.50	\$1,815.00	\$90.75	\$2,722.50	\$4,537.50
	Oil in equipment (clean wrap, dispose of oil dispose of oil reservoir and lines as PCBs containing waste)	3	EA	\$726.00	\$2,178.00	\$2,266.33	\$6,798.99	\$8,976.99
	Subtotal							\$49,642.67
Division 3	CONCRETE							
33129	Marine Concrete							
	Bulkhead							
	Section A							
	6" thick protective concrete encasement 12' high	2088	SF	\$131.89	\$275,386.32	\$131.89	\$275,386.32	\$550,772.64
	Section B							
	6" thick protective concrete encasement 12' high	3084	SF	\$145.20	\$447,796.80	\$145.20	\$447,796.80	\$895,593.60
	Concrete Pile Cap 11'6" x 3'6" x 2'6"	45	CY	\$5,844.30	\$262,993.50	\$5,844.30	\$262,993.50	\$525,987.00
	Concrete Sheet Pile Cap 1' thk	38	CY	\$1,875.50	\$71,269.00	\$1,875.50	\$71,269.00	\$142,538.00
	Roughen surfaces between pile and pile cap	28	EA	\$2,117.50	\$59,290.00	\$2,117.50	\$59,290.00	\$118,580.00
	Hand Picked mortar pitch away from sheet to facilitate drainage	174	LF	\$2.72	\$473.72	\$2.72	\$473.72	\$947.43
	Subtotal							\$2,234,418.67
34100	Precast and Prestressed Concrete							
	Precast prestressed concrete plank with concrete topping	2606	SF	\$27.83	\$72,524.98	\$27.83	\$72,524.98	\$145,049.96
	Concrete topping above planks	3598	SF	\$26.62	\$95,778.76	\$26.62	\$95,778.76	\$191,557.52
	Subtotal							\$336,607.48



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St. & Gansevoort St.

Bidder: Gramercy Group, Inc.

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
Division 5	STRUCTURAL STEEL							
51200	Structural Steel Framing							
	Bulkhead							
	Section A							
	4' high Guard rail (Not Required)							
	Section B							
	4' high Guard rail	257	LF	\$706.23	\$181,500.75	\$706.23	\$181,500.75	\$363,001.50
	Neoprene Bearing Pad (3/8" thick) between pilecap and plank	500	SF	\$6.05	\$3,025.00	\$12.10	\$6,050.00	\$9,075.00
	Subtotal							\$372,076.50
Division 26	ELECTRICAL							
265600	Exterior Light Pole							
	25' light pole with LED light fixture, solar panel & battery	25	EA	\$3,630.00	\$90,750.00	\$4,840.00	\$121,000.00	\$211,750.00
	Foundation for above	25	EA	\$1,815.00	\$45,375.00	\$1,815.00	\$45,375.00	\$90,750.00
	Subtotal							\$302,500.00
Division 31	EARTHWORK							
312000	Earth moving							
	Remove existing							
	Electric line	350	LF	\$0.00	\$0.00	\$12.10	\$4,235.00	\$4,235.00
	6" water mains	30	LF	\$0.00	\$0.00	\$12.10	\$363.00	\$363.00
	8" water mains	5	LF	\$0.00	\$0.00	\$121.00	\$605.00	\$605.00
	12" water mains	5	LF	\$0.00	\$0.00	\$121.00	\$605.00	\$605.00
	Telephone line	30	LF	\$0.00	\$0.00	\$12.10	\$363.00	\$363.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Gas line to be removed to property line	15	LF	\$0.00	\$0.00	\$12.10	\$181.50	\$181.50
	Telecom manholes to be removed	1	EA	\$0.00	\$0.00	\$1,815.00	\$1,815.00	\$1,815.00
	4' high chain-link fence to be removed including footings and gates	10	LF	\$0.00	\$0.00	\$3.63	\$36.30	\$36.30
	5' high chain-link fence to be removed including footings and gates	100	LF	\$0.00	\$0.00	\$3.63	\$363.00	\$363.00
	8' high chain-link fence to be removed including footings and gates	35	LF	\$0.00	\$0.00	\$3.63	\$127.05	\$127.05
	Retaining wall including footing to be removed	30	LF	\$0.00	\$0.00	\$12.10	\$363.00	\$363.00
	Concrete slab to be removed	10000	SF	\$0.00	\$0.00	\$3.63	\$36,300.00	\$36,300.00
	Asphalt pavement to be removed	93420	SF	\$0.00	\$0.00	\$1.31	\$122,081.26	\$122,081.26
	Existing cobblestones in area to be removed and stockpiled for future use by client	1	LS	\$0.00	\$0.00	\$60,500.00	\$60,500.00	\$60,500.00
	Concrete Jersey barriers to be stockpiled for reuse	200	LF	\$0.00	\$0.00	\$9.08	\$1,815.00	\$1,815.00
	Bollards to be removed	100	EA	\$0.00	\$0.00	\$60.50	\$6,050.00	\$6,050.00
	9'-0" dia plastic tank including footing to be removed	1	EA	\$0.00	\$0.00	\$1,815.00	\$1,815.00	\$1,815.00
	Ramp						\$0.00	\$0.00
	Demolition of ramps and roads	20000	SF	\$1.21	\$24,200.00	\$2.42	\$48,400.00	\$72,600.00
	Demolition of ramp walls	1000	LF	\$20.57	\$20,570.00	\$12.10	\$12,100.00	\$32,670.00
	Trees	9	EA		\$0.00	\$1,815.00	\$16,335.00	\$16,335.00
	Bulkhead							
	Section A							
	Removing existing							
	Concrete curb 18" x 12"	173	LF	\$9.08	\$1,569.98	\$9.08	\$1,569.98	\$3,139.95
	5" Cobble Stone	6920	SF	\$0.91	\$6,279.90	\$0.91	\$6,279.90	\$12,559.80
	6" Concrete Slab	6920	SF	\$1.06	\$7,368.42	\$1.06	\$7,368.42	\$14,736.83
	Concrete Sea Wall	163	CY	\$121.00	\$19,723.00	\$121.00	\$19,723.00	\$39,446.00
	Section B							
	Removing existing							
	Concrete curb 18" x 12"	257	LF	\$9.08	\$2,332.28	\$9.08	\$2,332.28	\$4,664.55
	5" Cobble Stone	8995	SF	\$0.91	\$8,162.96	\$0.91	\$8,162.96	\$16,325.93
	6" Concrete Slab	8995	SF	\$1.06	\$9,577.88	\$1.06	\$9,577.88	\$19,155.75
	Concrete Sea Wall	267	CY	\$121.00	\$32,307.00	\$121.00	\$32,307.00	\$64,614.00
	3"x6" Timber Decking	3084	SF	\$0.61	\$1,865.82	\$0.61	\$1,865.82	\$3,731.64
	12"x12" timber pile cap	396	LF	\$24.20	\$9,583.20	\$24.20	\$9,583.20	\$19,166.40
	12"x12" timber pile horizontal cap	257	LF	\$24.20	\$6,219.40	\$24.20	\$6,219.40	\$12,438.80



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

COOPERATION SUB CONTRACT FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Bulkhead							
	Section A							
	Soil Excavation	1185	CY	\$31.46	\$37,280.10	\$31.46	\$37,280.10	\$74,560.20
	Section B							
	Soil Excavation	2332	CY	\$31.46	\$73,364.72	\$31.46	\$73,364.72	\$146,729.44
	Subtotal							\$790,492.40
312200	Site Grading							
	Site grading to proposed levels	220000	SF	\$0.00	\$0.00	\$0.35	\$77,000.00	\$77,000.00
	Subtotal							\$77,000.00
312300	Backfill of Building and Utility Removal Areas							
	Salt Shed							
	9" gravel/ crushed stone	550	CY	\$75.32	\$41,427.38	\$7.26	\$3,993.00	\$45,420.38
	51" coarse sand material	3000	CY	\$55.54	\$166,617.00	\$7.26	\$21,780.00	\$188,397.00
	Mirafi 160N geo-fabric	16000	SY	\$1.31	\$20,908.80	\$0.00	\$0.00	\$20,908.80
	Cart away debris to a distance of 50 miles from site	Included Above						
	Marine Transfer Station							
	Cart away debris to a distance of 50 miles from site	Included Above						
	Destructor Plant							
	9" gravel/ crushed stone	1250	CY	\$75.32	\$94,153.13	\$7.26	\$9,075.00	\$103,228.13
	51" coarse sand material	7000	CY	\$55.54	\$388,773.00	\$7.26	\$50,820.00	\$439,593.00
	38" coarse sand material	Included Above						
	Mirafi 160N geo-fabric	47000	SY	\$1.31	\$61,419.60	\$0.00	\$0.00	\$61,419.60
	Cart away debris to a distance of 50 miles from site	Included Above						
	Site Area							
	Excavation up to 5'-0" below ground	32000	CY	\$54.45	\$1,742,400.00	\$9.68	\$309,760.00	\$2,052,160.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
 Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
 Bidder: Gramercy Group, Inc.

CONTRACTORS BID EXAMINATION FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A
 Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	9" gravel/ crushed stone	3550	CY	\$75.32	\$267,394.88	\$7.26	\$25,773.00	\$293,167.88
	5 1/2" coarse sand material	20500	CY	\$55.54	\$1,138,549.50	\$7.26	\$148,830.00	\$1,287,379.50
	38" coarse sand material	Included Above						
	Mirafi 160N geo-fabric	137000	SY	\$1.31	\$179,031.60	\$0.00	\$0.00	\$179,031.60
	Cart away debris to a distance of 50 miles from site	Included Above						
	Ramp							
	9" gravel/ crushed stone	450	CY	\$75.32	\$33,895.13	\$7.26	\$3,267.00	\$37,162.13
	5 1/2" coarse sand material	2500	CY	\$55.54	\$138,847.50	\$7.26	\$18,150.00	\$156,997.50
	Mirafi 160N geo-fabric	20000	SY	\$1.31	\$26,136.00	\$0.00	\$0.00	\$26,136.00
	Cart away debris to a distance of 50 miles from site	Included Above						
	Clean fill @ hazardous excavation	Included Above						
	Dewatering	1	LS	\$49,610.00	\$49,610.00	\$48,400.00	\$48,400.00	\$98,010.00
	Bulkhead							
	Section A							
	Backfill	270	CY	\$36.30	\$9,801.00	\$60.50	\$16,335.00	\$26,136.00
	Geo Textile fabric	1000	SY	\$0.15	\$145.20	\$1.21	\$1,210.00	\$1,355.20
	3/4" crushed stone fill behind sheet pile	50	CY	\$36.30	\$1,815.00	\$60.50	\$3,025.00	\$4,840.00
	Section B							
	Backfill	100	CY	\$36.30	\$3,630.00	\$60.50	\$6,050.00	\$9,680.00
	Geo Textile fabric	500	SY	\$0.15	\$72.60	\$1.21	\$605.00	\$677.60
	Subtotal							\$5,031,700.30
312323.13	Backfill Material Environmental Testing Requirements							
	Verify bottom slab of receiving pit is broken (26' x 167')	1	LS	\$0.00	\$0.00	\$59,554.92	\$59,554.92	\$59,554.92
	Subtotal							\$59,554.92
312500	Soil Erosion and Sediment Control							
	Erosion Control							
	Filter fabric inlet protection	5	EA	\$2,420.00	\$12,100.00	\$2,420.00	\$12,100.00	\$24,200.00
	Silt fence	2000	LF	\$24.20	\$48,400.00	\$24.20	\$48,400.00	\$96,800.00



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID PREPARATION FORM

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St. & Gansevoort St.
Bidder: Gramercy Group, Inc.

CONTRACT 1 - General Construction

DDC ID: S216-404A
Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Stabilization construction entrance pad	1000	SF	\$1.21	\$1,210.00	\$10.89	\$10,890.00	\$12,100.00
	Turbidity curtain 6' high	1250	LF	\$232.32	\$290,400.00	\$0.00	\$0.00	\$290,400.00
	Subtotal							\$423,500.00
316213	Prestressed Concrete Piles							
	Section B							
	24" square precast prestressed pile, 190' deep	5320	LF	\$98.70	\$525,082.40	\$98.70	\$525,082.40	\$1,050,164.81
	Subtotal							\$1,050,164.81
316216.13	Steel Sheet Piling							
	Bulkhead							
	Section A							
	Tie Back 40' Long	15	EA	\$12,100.00	\$181,500.00	\$12,100.00	\$181,500.00	\$363,000.00
	8" HDPE pipe sleeve covering tie back	660	LF	\$9.68	\$6,388.80	\$9.68	\$6,388.80	\$12,777.60
	Sheet pile 58' deep @ sea wall	10092	SF	\$30.25	\$305,283.00	\$30.25	\$305,283.00	\$610,566.00
	Sheet pile 10' deep @ anchor wall	1670	SF	\$48.40	\$80,828.00	\$48.40	\$80,828.00	\$161,656.00
	Painting @ sheet pile	17538	SF	\$4.17	\$73,212.38	\$4.17	\$73,212.38	\$146,424.76
	Section B							
	Sheet pile 52.5' deep	13621	SF	\$33.88	\$461,479.48	\$33.88	\$461,479.48	\$922,958.96
	Painting @ sheet pile	20232	SF	\$4.17	\$84,458.48	\$4.17	\$84,458.48	\$168,916.97
	Subtotal							\$2,386,300.29
Division 32	Exterior Improvements							
321200	Asphalt Paving							
	3" bituminous concrete top course	2222	SY	\$20.57	\$45,706.54	\$7.26	\$16,131.72	\$61,838.26
	7" bituminous stabilized base course	2222	SY	\$42.35	\$94,101.70	\$7.26	\$16,131.72	\$110,233.42
	12" densely graded aggregate subbase	740	CY	\$32.67	\$24,175.80	\$7.26	\$5,372.40	\$29,548.20
	Subtotal							\$201,619.88



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID EVALUATION FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St. & Gansevoort St.

Bidder: Gramercy Group, Inc.

DDC ID: S216-404A

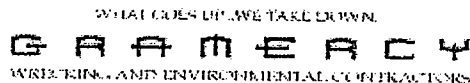
Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Concrete Curbs							
	Regular concrete curbs	INCLUDED BELOW						
	Depressed concrete curb	1800	LF	\$18.15	\$32,670.00	\$18.15	\$32,670.00	\$65,340.00
	Subtotal							\$65,340.00
	Temporary and Permanent Chain Link Fence and Gates							
	Temporary 5'-6" H chain link fence	1900	LF	\$60.50	\$114,950.00	\$60.50	\$114,950.00	\$229,900.00
	Concrete Jersey barrier below temporary fence	1900	LF	\$36.30	\$68,970.00	\$36.30	\$68,970.00	\$137,940.00
	Temporary 8' H x 10' W chain-link gate	1	EA	\$1,815.00	\$1,815.00	\$1,815.00	\$1,815.00	\$3,630.00
	Temporary 8' H x 24' W chain-link gate	1	EA	\$2,178.00	\$2,178.00	\$2,178.00	\$2,178.00	\$4,356.00
	Temporary 8' H x 30' W chain-link gate	1	EA	\$2,420.00	\$2,420.00	\$2,420.00	\$2,420.00	\$4,840.00
	Permanent 5'-6" H chain link fence	590	LF	\$60.50	\$35,695.00	\$60.50	\$35,695.00	\$71,390.00
	Concrete Jersey barrier below permanent fence	590	LF	\$36.30	\$21,417.00	\$36.30	\$21,417.00	\$42,834.00
	Move temporary 5'-6" chain link fence to permanent location	1000	LF	\$0.00	\$0.00	\$9.08	\$9,075.00	\$9,075.00
	Move concrete Jersey barrier to permanent location	1000	LF	\$0.00	\$0.00	\$9.08	\$9,075.00	\$9,075.00
	Move 8' H x 24' W chain-link gate to permanent location	1	EA	\$0.00	\$0.00	\$1,210.00	\$1,210.00	\$1,210.00
	Subtotal							\$514,250.00
	TOTAL CONTRACT 1 - GENERAL CONSTRUCTION WORK				\$13,647,945.20		\$15,963,054.80	\$29,611,000.00

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
SEE ATTACHED					



CURRENT AND PAST ASBESTOS ABATEMENT & DEMOLITION PROJECTS

Name of Project: Glenwood Power Station
Location of Project: Shore Road, Glenwood, NY
Owner: National Grid (KeySpan)
Dollar (\$) Value: \$16,193,340.00
Description of Work: Asbestos Abatement & full Demolition of 775,000 sf Power Plant, concrete Silos, tunnels, chimneys, asphalt removal & hazardous material remediation
Contact Person: Gary Gisonda Telephone: 516-545-3692
Project Dates: October 2012 - Present

Name of Project: JFK - DELTA Terminal 3 & Building 80
Location of Project: JFK Airport, Queens, NY
Owner: DELTA Airlines / Port Authority NY and NJ
Dollar (\$) Value: \$30,000,000.00
Description of Work: Complete asbestos abatement of 1,000,000 SF terminal including 660,000 SF of Friable Spray On Fireproofing, and Misc. ACM. Demolition includes the dismantlement of the Former Pan Am World Port structure, and backfilling of 100,000 cy.
Contact Person: Peter Chorman Telephone: 646-484-0133
Project Dates: June 2013 - Current

Name of Project: Former Hartz Mountain Facility
Location of Project: 550 Frank E. Rodgers Blvd South, Harrison, New Jersey
Owner: I. Heller Construction
Dollar (\$) Value: \$14,800,000.00
Description of Work: Complete asbestos abatement, demolition and soil remediation. Consisted of 10 buildings totaling 1,200,000 SF, Misc. Asbestos, PCB contaminated concrete slabs and 30,000 CY of PCB contaminated soil.
Contact Person: Steve Pozza Telephone: 732-287-4880
Project Dates: March 2012 - September 2013

Name of Project: Macy's
Location of Project: Bayshore, NY
Owner: Westfield LLC
Dollar (\$) Value: \$8,100,000.00
Description of Work: Complete asbestos abatement, and partial demolition. Asbestos abatement included the removal of 300,000 SF of Spray On Fireproofing, 300,000 SF of Floor Tile and Misc. ACM. Demolition consisted of the hand separation from the existing active mall and removal of 200,000 SF of structure.
Contact Person: Jerry White Telephone: 419-971-6025
Project Dates: May 2012 - October 2012

Name of Project: Fortunoff's
Location of Project: Wayne Town Center, New Jersey
Owner: Vornado Realty Trust
Dollar (\$) Value: \$2,995,000.00
Description of Work: Interior demolition of 1 ½ story 300,000 sf former Fortunoff's Bldg.
Contact Person: Eric Dinenberg Telephone: 201-587-1000
Project Dates: March 2012 to Oct. 2012

Name of Project: JCMUA Sedimentation Basin
Location of Project: Route 440, Jersey City, NJ
Owner: Jersey City Redevelopment Agency
Dollar (\$) Value: \$988,450.00
Description of Work: Asbestos abatement, demolition and concrete crushing of the former JCMUA Sedimentation Basin; Structural demolition of approximately 75,000 square feet.
Contact Person: Mary Patricia Noonan Telephone: 201-547-5810
Project Dates: December 2011 to May 2012

Name of Project: Brooklyn Navy Yard Bldgs. 128, 130 & 30
Location of Project: Brooklyn, NY
Owner: Brooklyn Navy Yard Development Corp.
Dollar (\$) Value: \$563,011.00
Description of Work: Asbestos abatement, hazardous materials remediation and selective interior demolition of Buildings 128, 123 and 28 located at the Brooklyn Navy Yard. Asbestos abatement of materials such as pipe insulation, floor tile and window caulking
Contact Person: James Corley Telephone: 718-907-5942
Project Dates: November, 2011 to February 2012

Name of Project: Former Avis Building
Location of Project: Garden City, NY
Owner: Equity One, Inc.
Dollar (\$) Value: \$4,702,270.00
Description of Work: Asbestos abatement of approximately 180,000 square feet of ACM spray on fireproofing. Structural demolition of approximately 500,000 square feet of buildings, hazardous remediation
Contact Person: Allan Brot Telephone: 212-796-1742
Project Dates: November, 2010 to February 2012

Name of Project: New Meadowlands Stadium
Location of Project: East Rutherford, NJ
Owner: NJ Sports & Exposition Authority
Dollar (\$) Value: \$16,036,210.00
Description of Work: Crane pick Escalator removal at Gate B; Selective Site Demolition/Excavation, Remediation & disposal of Contaminated Soil in lots 13 & 17 At Giant's Stadium
Contact Person: Tom Webb Telephone: 201-559-1400
Project Dates: July, 2007 to January 2010

Name of Project: New Meadowlands Stadium – Giant's Stadium
Location of Project: East Rutherford, NJ
Owner: NJ Sports & Exposition Authority
Dollar (\$) Value: \$10,221,900.00
Description of Work: Asbestos Abatement & Demolition of Giant's Stadium
Contact Person: Tom Webb Telephone: 201-559-1400

Project Dates: March 2010 to August 2010

Name of Project: Madison Yards – Eastside Access

Location of Project: Vesey & Church St, NYC, NY

Owner: MTA Capital Construction

Dollar (\$) Value: \$38,983,112.00

Description of Work: Demo & removal of rail, ballast & other railroad equip, below slab drainage, crash walls, replacement of upper level track drainage, lead paint removal, bring site to final grade

Contact Person: Rudy Batista Telephone: 212-736-4444

Project Dates: Jan. 2009 to April 2011

Name of Project: Former L. Mendel Rivers Federal Building

Location of Project: 334 Meeting St, Charleston, SC

Owner: Dewberry 334 Meeting Street, LLC

Dollar (\$) Value: \$1,541,000.00

Description of Work: Asbestos Abatement & Interior Demolition of a 100,000 + sf bldg..

Contact Person: Charles Rea Telephone: 404-888-7978

Project Dates: March 2011 to

Name of Project: JA Farley Post Office

Location of Project: 33rd Street & 8th Avenue., New York, NY

Owner: Empire State Development Corp.

Dollar (\$) Value: \$3,724,509.00

Description of Work: 250,000 sf of Asbestos Abatement of a 1,250,000.00 sf Bldg. & selective demolition to retrofit new facility for the postal employees

Contact Person: Joseph Burkard Telephone: 212-803-3262

Project Dates: Jan. 2010 to Aug. 2010

Name of Project: Creedmoor, Bldg. 74

Location of Project: 80-45 Winchester Blvd; Queens Village, NY

Owner: ACMH

Dollar (\$) Value: \$1,821,000.00

Description of Work: Asbestos Abatement & Interior Demolition of a 1,000,000 + sf bldg.

Contact Person: Peter Mulhall from Aurora Contractors Telephone: 631-981-3785

Project Dates: June 2009 to Nov. 2010

Name of Project: NYC HPD Emergency Work

Location of Project: Various locations in Manhattan and Bronx Counties

Owner: NYC Department of Housing Preservation and Development

Dollar (\$) Value: \$4,000,000.00

Description of Work: Emergency Asbestos Abatement and/or full interior demolition of buildings on an on-call basis including emergency cleanup of Crane Collapse

Contact Person: John Spoto Telephone: 212-863-7791

Project Dates: August 2006 to July 2008

Name of Project: WTC Eastside Basement

Location of Project: Vesey & Church Streets, NYC, NY

Owner: The Port Authority of NY & NJ

Dollar (\$) Value: \$3,731,800.00

Description of Work: Excavation & removal of asbestos containing debris

Contact Person: Robert Coyne Telephone: 917-560-5364

Project Dates: Sept. 2006 to Feb. 2007

Name of Project: Drake Hotel
Location of Project: 440 Park Ave; NYC, NY
Owner: McGraw Hudson
Dollar (\$) Value: \$6,165,887.00
Description of Work: Asbestos abatement and demolition of a 27 story hotel
Contact Person: Jason Adams 212-554-5900
Project Dates: Nov. 2006 to January 2008

Name of Project: Hicksville Parking Garage
Location of Project: Duffy Avenue, Hicksville, NY
Owner: Town of Oyster Bay
Dollar (\$) Value: \$1,892,453.00
Description of Work: Abatement & complete demolition of existing 4 story Parking Garage
Contact Person: Paul Johnson-Liro Telephone: 516-965-6218
Project Dates: August 2008 to June 2009

Name of Project: Former EDO Plant/New Tanger Mall
Location of Project: 455 Commack Road, Deer Park, NY
Owner: BDG Construction Corp.
Dollar (\$) Value: \$4,740,000.00
Description of Work: Asb. Abatement, Hazardous Material Remediation & Full Demolition of 800,000 sf plant & outer trailers
Contact Person: Chris Pirraglia Telephone: 516-921-0800
Project Dates: Sept. 2006 to Feb. 2007

Name of Project: Former BICC Cable Co.
Location of Project: One Point St., Yonkers, NY
Owner: Blackacres Partners OPS, LLC
Dollar (\$) Value: \$18,816,301.00
Description of Work: Asb. Abatement & Demolition of approx. 900,000 sf 4 story bldg. Incl PCB's, Tank Removal & 30,000 tons of hazardous/non-hazardous contaminated soil remediation, sheeting, dewatering/treatment of water and backfilling
Contact Person: Debra Rothberg Telephone: 212-714-1212
Project Dates: July, 2005 to November, 2012

Name of Project: Former Cerro Wire Plant
Location of Project: Robbins Lane, Syosset, NY
Owner: Taubman/Skanska
Dollar (\$) Value: \$6,729,613.96
Description of Work: Asbestos Abatement and Full Demolition of 350,000 sf plant, mass grading, Contaminated Soil Remediation and Water Main Installation
Contact Person: Frank Falciani of Skanska USA Building Inc. Telephone: 973 334-5300
Project Dates: Feb. 2004 to May 2005

Name of Project: 677 11th Avenue
Location of Project: 677 11th Ave; NYC., NY
Owner: Rockrose Construction
Dollar (\$) Value: \$574,400.00
Description of Work: Asb. Abatement & full Demolition of 4 story bldg. incl basement
Contact Person: Frank Vasta Telephone: 212-901-1754
Project Dates: June 2008 to Dec. 2008

Name of Project: Fulton Street Transit Center
Location of Project: Fulton Street & Broadway, NY, NY
Owner: MTA New York City Transit
Dollar (\$) Value: \$7,979,250.00
Description of Work: Asbestos/Lead Abatement, Remediation & Full Deconstruction of 5 Buildings
Contact Person: Bharat Kothari Telephone: 646-252-3489
Project Dates: Jan. 2007 to Dec. 2007

Name of Project: Maiden Lane
Location of Project: 151 & 161 Maiden Lane, NYC, NY
Owner: The Pioneers Company
Dollar (\$) Value: \$1,018,234.00
Description of Work: Asbestos Abatement & full demolition of a 6 story factory and 1 story Warehouse, removal of boilers and site work
Contact Person: Charles Fino/CHF Consulting Telephone: 212-686-1914
Project Dates: July 2007 to April 2008

Name of Project: Pepsi Cola and associated buildings
Location of Project: 46-00 5th St., L.I.C., NY
Owner: Queens West Development Corp.
Dollar (\$) Value: \$5,600,000.00
Description of Work: Full Demolition, Asbestos Abatement of 600,000 sf Buildings and removal of (8) 165' tall concrete Silos
Contact Person: Larry Ford of Empire Develop. Corp. Telephone: 718-786-2034
Project Dates: Sept. 2003 to Dec. 2008

Name of Project: Brooklyn College Plaza
Location of Project: Bedford Ave., Brooklyn, NY
Owner: Dormitory Authority, State of New York
Dollar (\$) Value: \$5,696,534.06
Description of Work: Asb. Abate., hazardous remediation, full demo & site restoration of 3 story, 270,000 sf bldg
Contact Person: Frank Yozzo of Turner Construction Telephone: 212-229-6351
Project Dates: Aug. 2004 to Oct. 2006

Name of Project: John Jay College
Location of Project: 524 W. 59th Street, New York, NY
Owner: Dormitory Authority, State of New York
Dollar (\$) Value: \$2,124,700.00
Description of Work: Asbestos Abatement & full demolition of 2 story, 100,000 sf building
Contact Person: Scott Vambucco of Turner Construction Telephone: 212-229-6429
Project Dates: May 2006 to Oct. 2007

Name of Project: Harlem Hospital
Location of Project: 506 Lenox Ave., New York, NY
Owner: DASNY
Dollar (\$) Value: \$2,962,000.00
Description of Work: Asbestos Abatement and full demo of 6 story, 85,000 sf OPD Bldg.
Contact Person: Peter Jackson of DASNY Telephone: 212-273-5000
Project Dates: Dec. 2005 to Dec. 2006

Name of Project: Tribeca – Restaurant Tower
Location of Project: West St., Washington & Debrosses Streets, NYC, NY
Owner: Tribeca Construction LLC.
Dollar (\$) Value: \$2,122,464.00
Description of Work: Asb. Abatement & full Demolition of 5 buildings (warehouses),
Additional Soil Removal & Removal of Hazardous Materials
Contact Person: William Wallerstein Telephone: 212-333-3353
Project Dates: April 2006 to April 2007

Name of Project: 14, 16, 18, 20 E. 53rd St. & 510 Madison Ave.
Location of Project: East 53rd St. & Madison Ave., New York, NY
Owner: McGraw Hudson Construction
Dollar (\$) Value: \$2,585,000.00
Description of Work: Asb. Abatement & full Demolition of 4 bldgs from 6 – 18 stories &
Remediation of Hazardous Materials
Contact Person: David Dods Telephone: 212-557-0099
Project Dates: Sept. 2006 to Feb. 2007

Name of Project: U.S. Mission to the United Nations
Location of Project: United Nations Plaza, New York, NY
Owner: U.S. General Services Administration
Dollar (\$) Value: \$2,168,850.00
Description of Work: Environmental Remediation of hazardous materials including Asbestos
abatement, Full Demolition of 12 story office Bldg, incl. 16 story mechanical Section.
Contact Person: Jim O'Donnell of Jacobs Engineering Telephone: 212 268-1500
Project Dates: June 2004 to May 2005

Name of Project: Van Nest School
Location of Project: 1640 Bronxdale Ave; Bronx, NY
Owner: NYC SCA/Civic Builders, Inc.
Dollar (\$) Value: \$1,586,991.00
Description of Work: Asbestos Abatement, Full Demolition of Building & Tank Removal
Contact Person: Jill Crawford, Civic Builders Telephone: 212-571-7260
Project Dates: Jan. 2008 to July 2008

Name of Project: Former Daily News Print Shop
Location of Project: 55-02 2nd St., L.I.C., NY
Owner: Queens West Development Corp.
Dollar (\$) Value: \$1,400,000.00
Description of Work: Demolition, Hazardous Material Remediation and Asbestos Abatement
of Approx. 100,000 sf Bldg.
Contact Person: Larry Ford of Empire Develop. Corp. Telephone: 718-786-2034
Project Dates: Jan. 2003 to Jan. 2004

Name of Project: Yale and Lowenstein Buildings

Location of Project: 608 W 40th St. & 460 12th Ave., NYC, NY

Owner: Queens West Development Corp.

Dollar (\$) Value: \$1,025,495.00

Description of Work: Demolition, Hazardous Material Remediation and Asbestos Abatement of 2 Bldgs.

Contact Person: Larry Ford of Empire Develop. Corp. Telephone: 718-786-2034

Project Dates: August 2006 to April 2007

Name of Project: Endeavor School, 510 Waverly Avenue, Phase 1

Location of Project: 510 Waverly Ave; Brooklyn, NY

Owner: NYC SCA/Civic Builders, Inc.

Dollar (\$) Value: \$429,843.00

Description of Work: Asbestos Abatement & complete demolition of existing 2 & 3 story & abatement of 6 story structure

Contact Person: Annie Churchill, Civic Builders Telephone: 212-571-7260

Project Dates: Oct. 2007 to May 2008

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
SEE ATTACHED							

NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
ATTACHMENT B - UNCOMPLETED CONSTRUCTION CONTRACTS

NYS Vendor ID: 1000045327

Vendor Name: Gramercy Group, Inc.

Question 3.1: List all current uncompleted construction contracts:									
Agency/Owner	Telephone No.	Designer Architect and /or Design Engineer	Award Date	Completion Date					
1. Town of North Hempstead/Grand St School	(516) 869-7695	Designer Architect and /or Design Engineer	1/10/2014	6/1/2014					
Contact Person Mike Kelly									
Contract No. DPW 12-12	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	EIN of JV, if applicable						
		Total Contract Amount \$647,795.00	Amount Sublet to others	Uncompleted Amount \$647,795.00					
		Award Date 1/2/2013	Completion Date 2/28/2014						
2. PSE&G/Littleton Ave	(973) 430-3616	Designer Architect and /or Design Engineer in house							
Contact Person Michael Phillips									
Contract No. 4500733854	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	EIN of JV, if applicable						
		Total Contract Amount \$6,400,512.00	Amount Sublet to others	Uncompleted Amount \$209,672.00					
		Award Date 7/19/2002	Completion Date 9/15/2014						
3. National Grid/Glenwood Power Station	(516) 545-3692	Designer Architect and /or Design Engineer TRC Engineering Inc.							
Contact Person Gary Gisonda									
Contract No. 722646	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	EIN of JV, if applicable						
		Total Contract Amount \$17,612,986.00	Amount Sublet to others	Uncompleted Amount \$3,775,337.00					
		Award Date 4/2/2013	Completion Date 7/31/2014						
4. Delta Air Lines/Delta Terminal 3	(718) 790-5905	Designer Architect and /or Design Engineer ARUP							
Contact Person Ryan Marzullo									
Contract No.	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	EIN of JV, if applicable						
		Total Contract Amount \$30,746,000.00	Amount Sublet to others \$6,300,000.00	Uncompleted Amount \$2,506,901.00					

NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
ATTACHMENT B – UNCOMPLETED CONSTRUCTION CONTRACTS

Vendor Name: Gramercy Group, Inc.

NYS Vendor ID: 1000045327

Question 3.1: List all current uncompleted construction contracts:									
5.	Agency/Owner National Grid (PSE&G)/Hicksville	Telephone No. (718) 403-2727	Designer Architect and /or Design Engineer in house	Award Date 10/30/2013	Completion Date 6/30/2014				
	Contact Person Robert Bednarz	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	Total Contract Amount \$475,707.00	Amount Sublet to others \$0.00	Uncompleted Amount \$199,707.00	EIN of JV, if applicable		
	Contract No. PO#3200051								
6.	Agency/Owner Halmar Int'l/Harrison PATH Buildings	Telephone No. (845) 735-3511	Designer Architect and /or Design Engineer	Award Date 1/24/2014	Completion Date				
	Contact Person John O'Connor	Prime or Sub Sub	Joint Venture (JV) Name, if applicable	Total Contract Amount \$1,750,000.00	Amount Sublet to others	Uncompleted Amount \$1,750,000.00	EIN of JV, if applicable		
	Contract No. H1208.1011								
7.	Agency/Owner Long Beach UFSC/Stalco/Long Beach H.S.	Telephone No. (631) 254-6767	Designer Architect and /or Design Engineer Csarch	Award Date 6/23/2011	Completion Date 4/30/2014				
	Contact Person Robert Isbit	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	Total Contract Amount \$2,216,408.00	Amount Sublet to others	Uncompleted Amount \$11,883.00	EIN of JV, if applicable		
	Contract No. 1108								
8.	Agency/Owner Stalco Construction/Vaughn College	Telephone No. (631) 254-6767	Designer Architect and /or Design Engineer John Ciardullo Assocs.	Award Date 1/8/2012	Completion Date 4/3/2014				
	Contact Person Joseph Solloch	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	Total Contract Amount \$2,155,949.00	Amount Sublet to others	Uncompleted Amount \$252,752.00	EIN of JV, if applicable		
	Contract No.								

NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
ATTACHMENT B – UNCOMPLETED CONSTRUCTION CONTRACTS

Vendor Name: Gramercy Group, Inc.

NYS Vendor ID: 1000045327

Question 3.1: List all current uncompleted construction contracts:

9.	Agency/Owner dck/FWF/IMP Hawaii	Award Date 12/12/2013		Completion Date 8/1/2014
	Contact Person Frank Falciani	Telephone No. (412) 384-1026	Designer Architect and /or Design Engineer	
	Contract No. 26103-001	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	EIN of JV, if applicable
Total Contract Amount \$21,940,408.00		Amount Sublet to others	Uncompleted Amount \$17,000,000.00	
10.	Agency/Owner NYCDEP/	Award Date 4/12/2013		Completion Date 4/30/2014
	Contact Person Joseph Ascolese	Telephone No. (516) 239-1600	Designer Architect and /or Design Engineer	
	Contract No. CRO-3120SG	Prime or Sub Prime	Joint Venture (JV) Name, if applicable	EIN of JV, if applicable
Total Contract Amount \$950,000.00		Amount Sublet to others	Uncompleted Amount \$805,000.00	

Grand Total All Uncompleted Contracts	\$27,159,047.00
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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
Bronx Rehabilitation Center 15 Waters Place, Bronx, NY	Asbestos Abatement & Interior Demolition	\$794,497.00	TBD	DASNY John Capron 518.257.3202	
Bay Park STP 15 Marjorie Lane, E. Rockaway, NY	Asbestos Abatement & demolition of facility	\$2,240,000.00	August	Damon Urso, P.E. N.C. D.P.W. 516-571-7534	

Tax ID #: 13-3546842

APT E-
PIN#: 85014B0124

SCHEDULE B - Part II: M/WBE Participation Plan

Part II to be completed by the bidder/proposer:

Please note: For Non-M/WBE Prime Contractors who will NOT subcontract any services and will self-perform the entire contract, you must obtain a FULL waiver by completing the Waiver Application on pages 9 and 9a and timely submitting it to the contracting agency pursuant to the Notice to Prospective Contractors. Once a FULL WAIVER is granted, it must be included with your bid or proposal and you do not have to complete or submit this form with your bid or proposal.

Section I: Prime Contractor Contact Information

Tax ID #	<u>13-3546842</u>	FMS Vendor ID #	
Business Name	<u>Gramercy Group, Inc.</u>	Contact Person	<u>Rich Peterson</u>
Address	<u>3000 Burns Avenue, Wantagh, NY 11793</u>		
Telephone #	<u>(516) 876-0020</u>	Email	<u>rpeterson@gramercyusa.com</u>

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

PRIME CONTRACTOR ADOPTING AGENCY M/WBE PARTICIPATION GOALS

<input checked="" type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals. Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	Total Bid/Proposal Value	Agency Total Participation Goals (Line 1, Page 6)		Calculated M/WBE Participation Amount
	\$29,611,000.00	10%		\$2,961,100.00
	\$	X	=	\$ Line 2

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

<input type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Modified M/WBE Participation Goals. Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	Total Bid/Proposal Value	Adjusted Participation Goal (From Partial Waiver)		Calculated M/WBE Participation Amount
	\$	X	=	\$ Line 3

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

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

MBE WBE

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

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

Section IV: General Contract Information

What is the expected percentage of the total contract dollar value that you expect to award in subcontracts for services, regardless of M/WBE status? % 39

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

1. Fence	\$500,000.00
2. Hauling/Disposal	\$4,000,000.00
3. Paving/Curbs	\$350,000.00
4. Security	\$300,000.00
5. Sea Wall/Marine	\$6,000,000.00
6. Electric	\$150,000.00
7. Engineering	\$100,000.00
8. Photography	\$11,000.00
9. Scheduling	\$40,000.00
10. Site Security	\$200,000.00
11. Tanks	\$45,000.00
12. Plumbing	\$30,000.00
13.	
14.	
15.	
16.	
17.	

Scopes of Subcontract Work

Section V: Vendor Certification and Required Affirmations

I hereby

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

Signature Vincent Parziale
Print Name Vincent Parziale

Date 6/09/2014
Title President

**BID BOND 1
FORM OF BID BOND**

KNOW ALL MEN BY THESE PRESENTS. That we, Gramercy Group, Inc., 3000 Burns Avenue, Wantagh, NY 11793

hereinafter referred to as the "Principal", and Arch Insurance Company, Three Parkway, Suite 1500, Philadelphia, PA 19102

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

Ten Percent of Proposal Price

(\$ 10% of P.P. _____), 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 Asbestos abatement and demolition of DSNY Facilities at

Gansevoort Peninsula. Location: 4 Bloomfield Street, Manhattan, NY Project ID: S216-404A

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 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 16th day of May, 2014.

(Seal)

Gramercy Group, Inc.

(L.S.)

Principal

By:

Vincent Parziale
Vincent Parziale, President

(Seal)

Arch Insurance Company

Surety

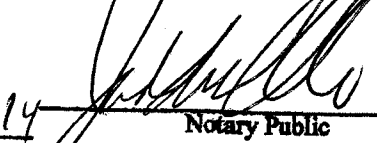
By:

Susan Lupski
Susan Lupski, Attorney-In-Fact

BID BOND 3

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Nassau ss:
On this 10th day of June, 2014, before me personally came Vincent Parziale to me known, who, being by me duly sworn, did depose and say that he resides at 15 Cedar Road, Belle Terre, NY 11777 that he is the President of Gramercy Group, Inc. the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

JUDITH A. AIELLO
Notary Public, State of New York
No. 01A16080641
Qualified in Suffolk County
Commission Exp. September 16, 20 14 
Notary Public

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

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

AFFIX ACKNOWLEDGEMENTS AND JUSTIFICATION OF SURETIES

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OF ... NEW YORK }
COUNTY OF ... NASSAU } SS

On this MAY 16, 2014, before me personally came SUSAN LUPSKI

to me known, who, being by me duly sworn, did depose and say; that he/she resides in NASSAU COUNTY, State of ...New York..., that he/she is the Attorney-in-Fact of the ARCH INSURANCE COMPANY

the corporation described in which executed the above instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the Board of Directors of said corporation; and that he/she signed his/her name thereto by like order; and the affiant did further depose and say that the Superintendent of Insurance of the State of New York, has, pursuant to Section 1111 of the Insurance Law of the State of New York, issued to ...ARCH INSURANCE COMPANY (Surety) his/her certificate of qualification evidencing the qualification of said Company and its sufficiency under any law of the State of New York as surety and guarantor, and the propriety of accepting and approving it as such; and that such certificate has not been revoked.

Florence A. Pagan
Notary Public

FLORENCE A PAGAN
Notary Public, State of New York
No. 01PA6247525
Qualified in Nassau County
Term Expires August 29, 2015

NY acknowledgement

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON BLUE 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. Not valid for Mortgage, Note, Loan, Letter of Credit, Bank Deposit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Camille Maitland, Colette R. Chisholm, Desiree Cardlin, George O. Brewster, Gerard S. Macholz, Kristy Caporale, Lee Ferrucci, Nelly Renchiwicz, Rita Sagistano, Robert T. Pearson, Susan Lupski, Thomas Bean and Vincent A. Walsh of Uniondale, NY (EACH)

its true and lawful Attorney(s)-in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed

Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding Ninety Million Dollars (\$90,000,000.00)

This authority does not permit the same obligation to be split into two or more bonds in order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect.

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

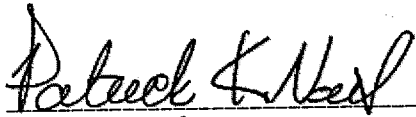
This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

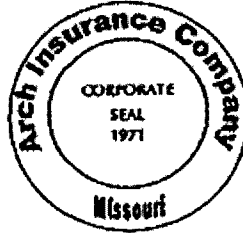
VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

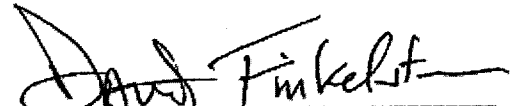
In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 25th day of April, 2014.

Attested and Certified

Arch Insurance Company


Patrick K. Nails, Secretary

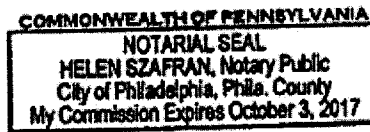




David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Helen Szafran, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

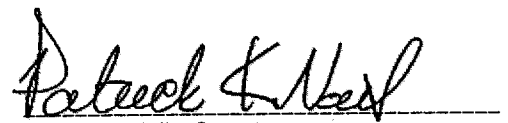



Helen Szafran, Notary Public
My commission expires 10/03/2017

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated April 25, 2014 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this _____ day of MAY 16 2014 20_____.


Patrick K. Nails, Secretary

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

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102



ARCH INSURANCE COMPANY
STATEMENT OF FINANCIAL CONDITION
December 31, 2013

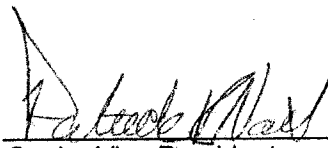
Assets

Cash in Banks	\$ 113,241,149
Bonds owned	1,730,368,149
Stocks	433,238,605
Premiums in course of collection	251,285,768
Accrued interest and other assets	<u>312,730,603</u>
 Total Assets	 <u><u>\$ 2,840,864,274</u></u>

Liabilities

Reserve for losses and adjustment expenses	\$ 1,200,735,312
Reserve for unearned premiums	307,521,736
Ceded reinsurance premiums payable	105,942,093
Amounts withheld or retained by company for account of others	188,907,409
Reserve for taxes, expenses and other liabilities	<u>301,130,327</u>
 Total Liabilities	 2,104,236,877
 Surplus as regards policyholders	 <u>736,627,397</u>
 Total Surplus and Liabilities	 <u><u>\$ 2,840,864,274</u></u>

By: 
Senior Vice President, Chief
Financial Officer and Treasurer

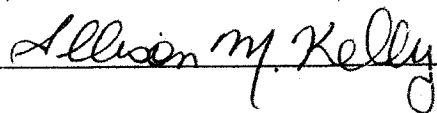
Attest: 
Senior Vice President,
General Counsel and Secretary

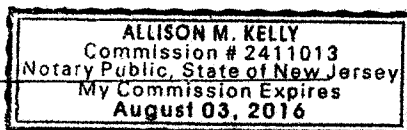
State of New Jersey)
) SS
County of Hudson)

Thomas James Ahern, Senior Vice President, Chief Financial Officer and Treasurer and Patrick Kenneth Nails, Senior Vice President, General Counsel and Secretary being duly sworn, of ARCH INSURANCE COMPANY, Missouri; and that the foregoing is a true and correct statement of financial condition of said company, as of December 31, 2013.

Subscribed and sworn to before me, this 10th day of March, 2014

Notary Public





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: Gramercy Group, Inc.
Bidder's Address: 3000 Burns Avenue, Wantagh, NY 11793
Bidder's Telephone Number: (516) 876-0020
Bidder's Fax Number: (516) 876-0021
Date of Bid Opening: June 10, 2014
Project ID: #85014B0124-Demolition of DSNY Facilities at Gansevoort Peninsula

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

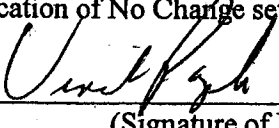
(1) **Submission of Vendex Questionnaires to MOCS:** By signing in the space provided below, the Bidder certifies that as of the date specified below, the Bidder has submitted Vendex Questionnaires to the Mayor's Office of Contract Services, Attn: VENDEX, 253 Broadway, 9th Floor, New York, New York 10007.

Date of Submission: September 6, 2011

By: 
(Signature of Partner or corporate officer)

Print Name: Vincent Parziale, President

(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: Vincent Parziale, President

Certificate of No Change Form

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

I, Frank Castiglia, 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: Gramercy Group, Inc.

Vendor's Address: 3000 Burns Avenue, Wantagh, NY 11793

Vendor's EIN or TIN: 13-3546842 Requesting Agency: NYC Department of Design & Construction

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

Signature date on the last full vendor questionnaire signed by the submitting vendor: 9/04/2014

Signature date on changed submission, if applicable, for the submitting vendor: n/a

Principal Questionnaire

This section refers to the most recent principal questionnaire submissions.

	Principal Name	Date of signature on last full Principal Questionnaire	Date(s) of signature on Changed Submission (if applicable)
1	Vincent Parziale	9/04/2014	
2	Frank Castiglia	9/04/2014	
3			
4			
5			
6			

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

Certification *This section is required.*

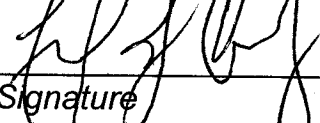
This form must be signed and notarized. Please complete this twice. Copies will not be accepted.

Certified By:

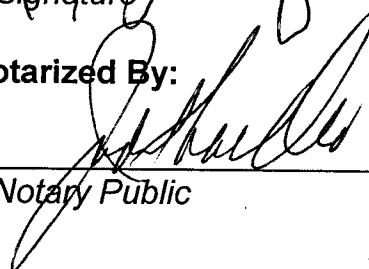
Frank Castiglia
Name (Print)

Secretary
Title

Gramercy Group, Inc.
Name of Submitting Entity


Signature 09/22/2014
Date

Notarized By:


Notary Public Suffolk
County License Issued 01A16080641
License Number

Sworn to before me on: 11/06/2014
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

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

1. Your contractual relationship in this contract is: Prime contractor Subcontractor
- 1a. Are MWBE goals attached to this project? Yes No
2. Please check one of the following if your firm would like information on how to certify with the City of New York as a:
 Minority Owned Business Enterprise
 Women Owned Business Enterprise
 Disadvantaged Business Enterprise
 Locally Based Business Enterprise
 Emerging Business Enterprise
- 2a. If you are certified as an MBE, WBE, LBE, EBE or DBE, what city/state agency are you certified with? N/A Are you DBE certified? Yes No
3. Please indicate if you would like assistance from SBS in identifying certified M/WBEs for contracting opportunities: Yes No
4. Is this project subject to a project labor agreement? Yes No
5. Are you a Union contractor? Yes No If yes, please list which local(s) you affiliated with General Contractors Assoc., Locals 14, 15, 66, 78, 79, 138
6. Are you a Veteran owned company? Yes No

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

7. 13-3546842 info@gramercyusa.com
Employer Identification Number or Federal Tax I.D. Email Address
8. Gramercy Group, Inc.
Company Name
9. 3000 Burns Avenue, Wantagh, NY 11793
Company Address and Zip Code
10. Vincent Parziale (516) 876-0020 ext. 101
Chief Operating Officer Telephone Number
11. same
Designated Equal Opportunity Compliance Officer Telephone Number
(If same as Item #10, write "same")
12. same
Name of Prime Contractor and Contact Person
(If same as Item #8, write "same")

13. Number of employees in your company: 50 +/-

14. Contract information:

(a) NYC DDC Contracting Agency (City Agency) (b) _____ Contract Amount

(c) 85014B0124 Procurement Identification Number (PIN) (d) _____ Contract Registration Number (CT#)

(e) TBD Projected Commencement Date (f) TBD Projected Completion Date

(g) Description and location of proposed contract:
Demolition of DSNY Facilities at Gansevoort Peninsula, 4 Bloomfield St; Manhattan, NY 10004

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

If yes, attach a copy of certificate.

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

If yes, attach a copy of certificate.

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

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

Date submitted: _____
Agency to which submitted: _____
Name of Agency Person: _____
Contract No: _____
Telephone: _____

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

If yes,

(a) Name and address of OFCCP office.

(b) Was a Certificate of Equal Employment Compliance issued within the past 36 months?
Yes___ No X

If yes, attach a copy of such certificate.

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

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

(d) Were any deficiencies found? Yes___ No___

If yes, attach a copy of such findings.

19. Is your company or its affiliates a member or members of an employers' trade association which is responsible for negotiating collective bargaining agreements (CBA) which affect construction site hiring? Yes X No___

If yes, attach a list of such associations and all applicable CBA's.

General Contractors Association

PART II: DOCUMENTS REQUIRED

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

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

21. To comply with the Immigration Reform and Control Act of 1986 when and of whom does your firm require the completion of an I-9 Form?

- (a) Prior to job offer Yes ___ No X
- (b) After a conditional job offer Yes ___ No X
- (c) After a job offer Yes X No ___
- (d) Within the first three days on the job Yes X No ___
- (e) To some applicants Yes ___ No X
- (f) To all applicants Yes ___ No X
- (g) To some employees Yes ___ No X
- (h) To all employees Yes X No ___

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

They are kept in the employees' file in the payroll department in the office.

23. Does your firm or any of its collective bargaining agreements require job applicants to take a medical examination? Yes X No ___

If yes, is the medical examination given:

- (a) Prior to a job offer Yes ___ No X
- (b) After a conditional job offer Yes ___ No X
- (c) After a job offer Yes ___ No X
- (d) To all applicants Yes ___ No X
- (e) Only to some applicants Yes X No ___

If yes, list for which applicants below and attach copies of all medical examination or questionnaire forms and instructions utilized for these examinations.

Asbestos workers are required to have a medical exam within the (1) year of working at a job site.

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

If yes, list the document(s) and page number(s) where these written policies are located.
See attached Employee Manual - Page 7

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

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

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

If yes, please attach a copy of this policy.

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

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

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

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

If yes, attach a log. See instructions.

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

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

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

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) Vincent Parziale 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.

Gramercy Group, Inc.
Contractor's Name

Judith Aiello Executive Assistant
Name of person who prepared this Employment Report Title

Vincent Parziale President
Name of official authorized to sign on behalf of the contractor Title

(516) 876-0020
Telephone Number

 June 9, 2014
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 9th day of June 20 14

 June 9, 2014
Notary Public Authorized Signature Date

JUDITH A. AIELLO
Notary Public, State of New York
No. 01A16080641
Qualified in Suffolk County
Commission Exp. September 16, 20 14

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

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

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

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT
Fence	TBD	Install Fencing	Fence	\$500,000.00
Trucking/Disposal	TBD	Haul and dispose	Trucking/disposal	\$4,000,000.00
Paving/curbs	TBD	Install asphalt pavement and concrete curbs	paving/curbs	\$350,000.00
Security	TBD	Secure the site	Security	\$300,000.00
Sea wall/Marine	TBD	Install sea wall/ remove old sea wall	Sea wall/Marine	\$6,000,000.00

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

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

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

SUBCONTRACTOR'S NAME*	OWNERSHIP (ENTER APPROPRIATE CODE LETTERS BELOW)	WORK TO BE PERFORMED BY SUBCONTRACTOR	TRADE PROJECTED FOR USE BY SUBCONTRACTOR	PROJECTED DOLLAR VALUE OF SUBCONTRACT
Electric - Redgrave	TBD	Provide temporary power	Electric	\$150,000.00
Engineering	TBD	Provide demo drawings and calculations	Engineering	\$100,000.00
Photography	TBD	Provide progress photos	Photography	\$14,000.00
Scheduling	TBD	Provide schedule	Scheduling	\$40,000.00
Site Safety	TBD	Provide site safety	Site Safety	\$200,000.00

*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 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
Tanks	TBD	Decommission & remove tanks	Tanks	\$45,000.00
Plumbing - A Plus Water & Sewer Main	TBD	Disconnect water & sewer lines	Plumbing	\$30,000.00

*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:

Asbestos Abatement

Union Affiliation, if applicable

78

Total (Col. #1-10):

50

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

44

Total Female
(Col. #6 - 10):

6

MALES

	(1) White Non Hisp.		(2) Black Non Hisp.		(3) Asian	(4) Native Amer.
	(1) White Non Hisp.	(2) Black Non Hisp.	(3) Asian	(4) Native Amer.		
J	6	3	34	1		
H						
A						
TRN						
TOT						

FEMALES

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

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

We hire from the Union halls.

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.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.
Laborer (demolition) _____ Union Affiliation, if applicable _____ 79	20	4	5					1		
Total (Col. #1-10): 30										
Total Minority, Male & Female (Col. #2,3,4,5,7,8,9, & 10): 10										
Total Female (Col. #6 - 10): 1										
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)?

We hire from the Union halls.

FORM B: PROJECTED WORKFORCE

Trade: _____
 Operators _____

Union Affiliation, if applicable _____

Locals 14 & 15

Total (Col. #1-10):
10

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

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

FEMALES

	(1) White		(2) Black		(3) Hisp.		(4) Asian		(5) Native Amer.	
	Non	Hisp.	Non	Hisp.	Non	Hisp.	Non	Hisp.	Non	Hisp.
J	7		1		2					
H										
A										
TRN										
TOT										

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

We hire from the Union halls.

Prime Contractor Pre-Award Statement – Prevailing Wage Contracts

Agency: NYC Dept. of Design & Construction
Prime Contractor: Gramercy Group, Inc.
Contract #: 8216-404 A

On behalf of the prime contractor and contract shown above, I affirm that I have reviewed the following information with the contracting agency:

- The work to be done or the trades that will be employed on the contract;
- The Comptroller's prevailing wage schedules for each trade;
- The requirement to pay the prevailing wage and supplement rates in effect at the time the work is done, and the dates of likely changes in such rates (July 1 and January 1);
- The requirement for written agreements with all subcontractors, which include prevailing wage and supplement requirements;
- The registration, ratio and payment guidelines for apprentices, and whether their use is optional or required under this contract;
- The requirement to use City-approved certified payroll forms, the need to fill those forms out completely, and to submit such original payrolls within thirty (30) days of issuance of the first payroll and every thirty (30) days thereafter;
- The requirement to use standard sign-in and sign-out logs or an agency-approved electronic or biometric system, and that such logs must be submitted to the resident engineer or agency representative daily;
- The requirement that all workers on job sites shall wear laminated photo identification badges;
- The prohibition on cash payments to workers and subcontractors; all workers must be paid by check or direct deposit weekly (bi-weekly, where permitted by law [certain non-construction workers only]), and that for contracts over \$1,000,000 and subcontracts over \$750,000 such checks must be generated by either a payroll service or an agency-approved automated system; and
- That the prime contractor shall be liable to the City for the cost of enforcement in the event the prime contractor or any subcontractor is found in violation of these requirements.

I further affirm that the prime contractor will comply with these and all other relevant requirements of the New York State Labor Law and City of New York laws and regulations concerning payment of prevailing wages and supplements, and that violation of such laws may subject the prime contractor to various administrative, civil and criminal penalties.

Prime Contractor Signature: Vincent Parziale Date: 11/18/2014

Printed Name: Vincent Parziale

Position: President

Agency Witness: Christine Espinal Date: 11/18/14

Printed Name: Christine Espinal

Rev 5/14



Project Labor Agreement -- Letter of Assent

Dear:

The undersigned party confirms that it agrees to be a party to and be bound by the New York Agency, Project Labor Agreement as such Agreement may, from time to time, be amended by the parties or interpreted pursuant to its terms. The terms of the Project Labor Agreement, its Schedules, Addenda and Exhibits are hereby incorporated by reference herein.

The undersigned, as a Contractor or Subcontractor (hereinafter Contractor) on the Project known as Demolition of DSNY Facilities and located at Gansevoort Peninsula, Manhattan (hereinafter PROJECT), for and in consideration of the award to it of a contract to perform work on said PROJECT, and in further consideration of the mutual promises made in the Project Labor Agreement, a copy of which was received and is acknowledged, hereby:

- (1) Accepts and agrees to be bound by the terms and conditions of the Agreement, together with any and all schedules; amendments and supplements now existing or which are later made thereto;
- (2) Agrees to be bound by the legally established collective bargaining agreements and local trust agreements as set forth in the Project Labor Agreement and this Agreement but only to the extent of Program Work and as required by the PLA.
- (3) Authorizes the parties to such local trust agreements to appoint trustees and successor trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the Contractor but only to the extent of Program Work as required by the PLA.
- (4) Certifies that it has no commitments or agreements that would preclude its full and complete compliance with the terms and conditions of said Agreement. The Contractor agrees to employ labor that can work in harmony with all other labor on the Project and shall require labor harmony from every lower tier subcontractor it has engaged or may engage to work on the Project. Labor harmony disputes/issues shall be subject to the Labor Management Committee provisions.
- (5) Agrees to secure from any Contractor(s) (as defined in said Agreement) which is or becomes a Subcontractor (of any tier), to it, a duly executed Agreement to be Bound in from identical to this document.

Dated: July 1, 2014

Gramercy Group, Inc
(Name of Contractor or subcontractor)

(Name of CM; GC; Contractor or Higher Level Subcontractor)

Vincent Parziale
(Authorized Officer & Title)
Vincent Parziale, President

3000 Burns Ave; Wantagh, NY 11793
(Address)

(516) 876-0020/(516) 876-0021
(Phone) (Fax)

Contractor's State License
28908

Sworn to before me this 14
1st day of July, 2014

[Signature]
Notary Public

JUDITH A. AIELLO
Notary Public, State of New York
No. 01A16080641
Qualified in Suffolk County
Commission Exp. September 16, 2014

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

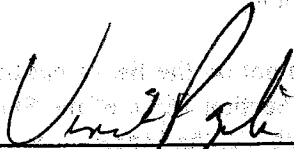
Pursuant to General Municipal Law §103-g, which generally prohibits the City from entering into contracts with persons engaged in investment activities in the energy sector of Iran, the bidder/proposer submits the following certification:

[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: Wantagh, New York
June 9, 20 14



SIGNATURE

Vincent Parziale

PRINTED NAME

President

TITLE

Sworn to before me this
9th day of June 2014

Notary Public

Dated: Wantagh, NY

JUDITH A. AIELLO
Notary Public, State of New York
No. 01A15080641
Qualified in Suffolk County
Commission Exp. September 16, 20 14

NOTICE TO BIDDERS

PROJECT #/DESCRIPTION: S216-404A – DEMOLITION OF DSNY FACILITIES AT GANSEVOORT PENINSULA

ADDENDUM NO. 1 HAS BEEN ISSUED FOR THE ABOVE REFERENCED PROJECT

Company Name: Grandrey Group, Inc.
Company Officer: *Phil J. Carter*
Signature

Please fax this acknowledgement receipt to 718-391-2615. If you have any questions, please call Emmanuel Charles at 718-391-2200 or Shameika Chappell at 718-391-1016.





NOTICE TO BIDDERS

PROJECT #/DESCRIPTION: S216-404A - DEMOLITION OF DSNY FACILITIES AT GANSEVOORT PENINSULA (MARINE TRANSFER STATION) - BOROUGH OF MANHATTAN

ADDENDUM NO. 2 IS BEING ISSUED FOR THE ABOVE REFERENCED PROJECT.

NOTE: There will be another walk through on Wednesday, May 21, 2014 between the hours of 8:00AM - 6:00PM. Attendance is *required* in order to place a bid. Bid is currently being rescheduled to June 10, 2014. Please see details in attached Addendum.

Company Name: GLAMERLY GROUP, INC

Company Officer: [Signature]
Signature

Please fax this acknowledgement receipt to 718-391-2615. If you have any questions, please call Emmanuel Charles at 718-391-2200 or Shameika Chappell at 718-391-1016.



THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

May 22, 2014

ADDENDUM No. # 3

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

S216-404A

Demolition of DSNY Facilities at Gansevoort Peninsula

This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

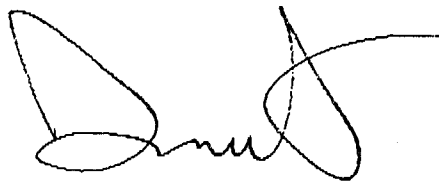
The bidder is advised that the items listed below apply to the project:

1. **Revisions to the Bid Booklet:**

- The bidders are advised that the last day to submit questions is May 27th, 2014 by close of business, 5pm.

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

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-2200, (718) 391-1283, or by fax at (718) 391-2615.



David Resnick, R.A.
Deputy Commissioner

Name of Bidder

By: _____

ACKNOWLEDGEMENT OF RECEIPT OF PACKAGE**PROJECT #:** 5216-404A

ADDENDA #3

PLEASE ACKNOWLEDGE RECEIPT OF DOCUMENT/S BY SIGNING BELOW:**COMPANY NAME:** GrAmercY Group, Inc.**PRINT****COMPANY OFFICER:** _____**SIGNATURE**

PLEASE FAX THIS ACKNOWLEDGEMENT TO 718-391-2615. IF YOU HAVE ANY QUESTIONS,
PLEASE CALL EMMANUEL CHARLES AT EXT.2200 OR SHAMEIKA CHAPPELL AT EXT.1016.

ACKNOWLEDGEMENT OF RECEIPT OF PACKAGE

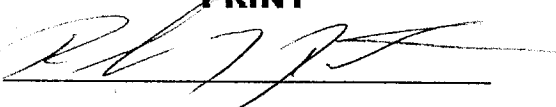
PROJECT #: 5216-404A

ADDENDA #4

PLEASE ACKNOWLEDGE RECEIPT OF DOCUMENT/S BY SIGNING BELOW:

COMPANY NAME: GRAMERCY GROUP INC.

PRINT

COMPANY OFFICER: 

SIGNATURE

PLEASE FAX THIS ACKNOWLEDGEMENT TO 718-391-2615. IF YOU HAVE ANY QUESTIONS,
PLEASE CALL EMMANUEL CHARLES AT EXT.2200 OR SHAMEIKA CHAPPELL AT EXT.1016.



NOTICE TO BIDDERS

**PROJECT #/DESCRIPTION: S216-404A- DEMOLITION OF DSNY FACILITIES
AT GANSEVOORT PENINSULA (MARINE TRANSFER STATION)-
BOROUGH OF BROOKLYN**

**ADDENDUM NO. 5 HAS BEEN ISSUED FOR THE ABOVE MENTIONED
PROJECT.**

Company Name: GRAMERCY Group Inc

Company Officer: [Signature]
Signature

**Please fax this acknowledgement receipt to 718-391-2615. If you have any questions,
please call Emmanuel Charles at 718-391-2200 or Shameika Chappell at 718-391-1016.**



NOTICE TO BIDDERS:

- **PROJECT LABOR AGREEMENT:** This contract is subject to a Project Labor Agreement (“PLA”) entered into between the City and the Building and Construction Trades Council of Greater New York (“BCTC”) affiliated Local Unions. By submitting a bid, the Contractor agrees that the PLA is binding on the Contractor and all subcontractors of all tiers. The bidder to be awarded the contract will be required to execute a “Letter of Assent” prior to award.

The Bidder is advised to review the following: (1) Notice regarding the PLA, (2) the PLA, and (3) the Letter of Assent, all of which are set forth at the beginning of Volume 2 of the Contract Documents.

- **SINGLE CONTRACT:** As stated above, this contract is subject to a PLA. The requirements of the Wicks Law for separate prime contractors **DO NOT APPLY** to any project that is covered by a PLA. Accordingly, the requirements of the Wicks Law for separate prime contractors do not apply to this Project. The Project consists of a single contract, the Contract for General Construction Work.

The Bidder is advised to review the Notice set forth at the beginning of Volume 2 of the Contract Documents. The Notice specifies revisions to the Contract Documents to provide that the Project consists of a single contract and to delete any and all references to separate prime contractors.

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.

**BID BOOKLET
PART A**

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PROJECT ID: S216-404A

**CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

BID BOOKLET

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**CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

SPECIAL NOTICE TO BIDDERS

BID SUBMISSION REQUIREMENTS

THE BID SHALL CONSIST OF TWO (2) SEPARATE, SEALED ENVELOPES. THE DOCUMENTS THAT MUST BE COMPLETED AND INCLUDED IN EACH SEPARATE ENVELOPE ARE LISTED BELOW.

BID ENVELOPE #1: Bid Envelope #1 shall contain the following items:

- Bid Form, including Affirmation
- Bid Security (if required, see page 22)
- Schedule B: M/WBE Utilization Plan (if participation goals have been established)

BID ENVELOPE #2: Bid Envelope #2 shall contain **ONLY** the following item:

- Bidder's Identification of Subcontractors (see pages 16 & 17)

**FAILURE TO SUBMIT THE FOUR ITEMS LISTED ABOVE
WILL RESULT IN THE DISQUALIFICATION OF THE BID**

BID ENVELOPE #1: In addition to the items listed above, Bid Envelope #1 shall also contain the following items: **DO NOT** Include the items listed below in Bid Envelope #2.

- Bid Breakdown (if required, see page 21)
- Safety Questionnaire
- Construction Employment Report (if bid is \$1,000,000 or more)
- Contract Certificate (if bid is less than \$1,000,000)
- Confirmation of Vendex Compliance
- Bidder's Certification of Compliance with Iran Divestment Act
- Special Experience Requirements Qualification Form (if required, see pages 3, 4)
- Any Addenda issued prior to the receipt of bids

**FAILURE TO SUBMIT THE EIGHT ITEMS LISTED ABOVE
MAY RESULT IN THE DISQUALIFICATION OF THE BID.**

- NOTES:**
- (1) All of the above referred to blank forms to be completed and submitted with the bid are included in the BID BOOKLET.
 - (2) If the bidder has any questions or requires additional information, please contact the Department of Design and Construction by phone (718-391-2601) or by fax (718-391-2615).
 - (3) **VENDEX QUESTIONNAIRES:** 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.
 - (5) **SPECIAL EXPERIENCE REQUIREMENTS FOR ASBESTOS:** The Bidder is advised that this contract contains strict requirements regarding the prior experience and licensing of the subcontractor who will perform any required asbestos abatement work. These special experience requirements are set forth in the section of the specifications which describes any required asbestos abatement work.

SPECIAL EXPERIENCE REQUIREMENTS

Bidders are advised that the special experience requirements set forth below apply to the General Construction Contractor if a check mark is indicated before the word "Yes". Compliance with these special experience requirements will be determined solely by the City. Failure to meet these special experience requirements will result in the rejection of the bid as non-responsive.

General Construction Contractor _____ YES X NO

- (A) **EXPERIENCE REQUIREMENTS FOR THE BIDDER (PRIME CONTRACTOR):** The special experience requirements set forth below apply to the bidder. Compliance with such special experience requirements will be evaluated at the time of the bid.
- 1) The bidder must, with the last five (5) consecutive years prior to the bid opening, have successfully completed in a timely fashion at least three (3) projects similar in scope and type to the required work.
- (B) **QUALIFICATION FORM:** For each project submitted to meet the experience requirements set forth above, the bidder must complete and submit with its bid the Qualification Form set forth in this Bid Booklet. All information on the Qualification Form must be provided.
- (C) **CONDITIONS:** The City may, in determining compliance with the special experience requirements set forth above, 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 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.
- (D) **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.
- (E) **COMPLIANCE:** Compliance with the experience requirements set forth herein will be determined solely by the City. The bidder is advised that failure to meet the above described experience will result in the rejection of the bid as non-responsive.

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Qualification Form

Project ID: S216-404A

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 work completed: _____

Was the work performed as a prime or a subcontractor: _____

Amount of Contract: _____

Date of Completion: _____

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 work completed: _____

Was the work performed as a prime or a subcontractor: _____

Amount of Contract: _____

Date of Completion: _____

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MWBE PROGRAM

M/WBE UTILIZATION PLAN

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

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

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

Rejection of the Bid: The bidder must complete Schedule B: M/WBE Utilization Plan (Part II) set forth in this Bid Booklet on the pages following the section entitled "Notice to All Prospective Contractors". A Schedule B submitted by the bidder which does not include the Vendor Certification and Required Affirmations (See Section V of Part II) will be deemed to be non-responsive, unless a full waiver of the Participation Goals is granted (Schedule B, Part III). In the event that the City determines that the bidder has submitted a Schedule B where the Vendor Certification and Required Affirmations are completed but other aspects of the Schedule B are not complete, or contain a copy or computation error that is at odds with the Vendor Certification and Required Affirmations, the bidder will be notified by the Agency and will be given four (4) calendar days from receipt of notification to cure the specified deficiencies and return a completed Schedule B to the Agency. Failure to do so will result in a determination that the Bid is non-responsive.

Receipt of notification is defined as the date notice is emailed or faxed (if the bidder has provided an email address or fax number), or no later than five (5) days from the date of mailing or upon delivery, if delivered.

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

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NOTICE TO ALL PROSPECTIVE CONTRACTORS

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

ARTICLE I. M/WBE PROGRAM

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

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

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

PART A

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

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

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

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

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

A Contractor that is a qualified joint venture (as defined in Section 6-129(c)(30)) shall be permitted to count a percentage of its own participation toward fulfillment of the relevant **Participation Goal**. In accordance with Section 6-129, the value of Contractor's participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that Contractor pays to direct subcontractors, and then multiplying the remainder by the percentage to be applied to total profit to

determine the amount to which an MBE or WBE is entitled pursuant to the joint venture agreement, provided that where a participant in a joint venture is certified as both an MBE and a WBE, such amount shall be counted either toward the goal for MBEs or the goal for WBEs, but not both.

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

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

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

C. THE BIDDER/PROPOSER MUST COMPLETE THE SCHEDULE B INCLUDED HEREIN (SCHEDULE B, PART II). A SCHEDULE B SUBMITTED BY THE BIDDER/PROPOSER WHICH DOES NOT INCLUDE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS (SEE SECTION V OF PART II) WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE PARTICIPATION GOALS IS GRANTED (SCHEDULE B, PART III). IN THE EVENT THAT THE CITY DETERMINES THAT THE BIDDER/PROPOSER HAS SUBMITTED A SCHEDULE B WHERE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER ASPECTS OF THE SCHEDULE B ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE VENDOR CERTIFICATION AND AFFIRMATIONS, THE BIDDER/PROPOSER WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED SCHEDULE B TO THE AGENCY. FAILURE TO DO SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS E-MAILED OR FAXED (IF THE BIDDER/PROPOSER HAS PROVIDED AN E-MAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) CALENDAR DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.

5. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, within 30 days of issuance by Agency of a notice to proceed, submit a list of proposed persons or entities to which it intends to award subcontracts within the subsequent 12 months. In the case of multi-year contracts, such list shall also be submitted every year thereafter. The Agency may also require the Contractor to report periodically about the contracts awarded by its direct subcontractors to indirect subcontractors (as defined in Section 6-129(c)(22)).
PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or

below \$3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor must identify all those to which it intends to award construction subcontracts for any portion of the Wicks trade work at the time of bid submission, regardless of what point in the life of the contract such subcontracts will occur. In identifying intended subcontractors in the bid submission, bidders may satisfy any Participation Goals established for this Contract by proposing one or more subcontractors that are MBEs and/or WBEs for any portion of the Wicks trade work. In the event that the Contractor's selection of a subcontractor is disapproved, the Contractor shall have a reasonable time to propose alternate subcontractors.

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

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

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

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

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

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

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

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

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

- (i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;
- (ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;
- (iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the M/WBE Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;
- (v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;
- (vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;
- (vii) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;
- (viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

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

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

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

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

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

PART B: MISCELLANEOUS

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

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

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

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

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

ARTICLE II. ENFORCEMENT

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

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

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

- (a) entering into an agreement with the Contractor allowing the Contractor to cure the violation;
- (b) revoking the Contractor's pre-qualification to bid or make proposals for future contracts;
- (c) making a finding that the Contractor is in default of the Contract;
- (d) terminating the Contract;
- (e) declaring the Contractor to be in breach of Contract;
- (f) withholding payment or reimbursement;
- (g) determining not to renew the Contract;
- (h) assessing actual and consequential damages;

- (i) assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the M/WBE Program, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;
- (j) exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or
- (k) taking any other appropriate remedy.

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

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

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

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

Tax ID #: _____

APT E-
PIN#: 85014B0124

Contract # 1 - General Construction Work

SCHEDULE B - M/WBE Utilization Plan

Part I: M/WBE Participation Goals

Part I to be completed by contracting agency

Contract Overview

APT E-Pin # 85014B0124 FMS Project ID#: S216-404A

Project Title/Agency Demolition of DSNY Facilities at Gansevoort Peninsula

PIN # 8502014TR0003C

Bid/Proposal
Response Date: THURSDAY, MAY 22, 2014

Contracting Agency Department of Design and Construction

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

Contact Person Donna Pope Title Director

Telephone # (718) 391-1556 Email poped@ddc.nyc.gov

Project Description *(attach additional pages if necessary)*

This Project consists of the demolition and remediation all DSNY buildings on the Gansevoort peninsula, and remediation of the existing soil to be replaced by new fill. The DSNY buildings to be demolished consist of the Destructor Plant, the M5 Garage, a Salt Shed, and a Marine Transfer Station. The Marine Transfer Station pier will also be demolished as part of the project. The existing FDNY Marine One pier will remain and be fully operational throughout the project.

M/WBE Participation Goals for Services

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

Prime Contract Industry: Construction

Group	Percentage
<u>Unspecified *</u>	<u>10 %</u>
OR	
<u>Black American</u>	<u>UNSPECIFIED %</u>
<u>Hispanic American</u>	<u>UNSPECIFIED %</u>
<u>Asian American</u>	<u>UNSPECIFIED %</u>
<u>Women</u>	<u>UNSPECIFIED %</u>
Total Participation Goals	10 %

Line 1

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

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Tax ID #: _____

APT E-

PIN#: 85014B0124

SCHEDULE B - Part II: M/WBE Participation Plan

Part II to be completed by the bidder/proposer:

Please note: For Non-M/WBE Prime Contractors who will NOT subcontract any services and will self-perform the entire contract, you must obtain a FULL waiver by completing the Waiver Application on pages 9 and 9a and timely submitting it to the contracting agency pursuant to the Notice to Prospective Contractors. Once a FULL WAIVER is granted, it must be included with your bid or proposal and you do not have to complete or submit this form with your bid or proposal.

Section I: Prime Contractor Contact Information

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

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

PRIME CONTRACTOR ADOPTING AGENCY M/WBE PARTICIPATION GOALS

<input type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Agency M/WBE Participation Goals. Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	Total Bid/Proposal Value		Agency Total Participation Goals (Line 1, Page 6)		Calculated M/WBE Participation Amount
	\$	X	=	\$	Line 2

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

<input type="checkbox"/> For Prime Contractors (including Qualified Joint Ventures and M/WBE firms) adopting Modified M/WBE Participation Goals. Calculate the total dollar value of your total bid that you agree will be awarded to M/WBE subcontractors for services and/or credited to an M/WBE prime contractor or Qualified Joint Venture. Please review the Notice to Prospective Contractors for more information on how to obtain credit for M/WBE participation.	Total Bid/Proposal Value		Adjusted Participation Goal (From Partial Waiver)		Calculated M/WBE Participation Amount
	\$	X	=	\$	Line 3

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

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

Section IV: General Contract Information

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

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

✓ **Scopes of Subcontract Work**

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

Section V: Vendor Certification and Required Affirmations

I hereby:

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

Signature _____ Date _____
 Print Name _____ Title _____

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

Contract Overview

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

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

_____ %
 Agency M/WBE Participation Goal

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

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

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

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

References

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

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

List 3 most recent contracts performed for other entities. Include information for each subcontract awarded in performance of such contracts. Add more pages if necessary.
 (Complete ONLY if vendor has performed fewer than 3 New York City contracts.)

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

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

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

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

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

Shaded area below is for agency completion only

AGENCY CHIEF CONTRACTING OFFICER APPROVAL
 Signature: _____ Date: _____
 CITY CHIEF PROCUREMENT OFFICER APPROVAL
 Signature: _____ Date: _____
 Waiver Determination
 Full Waiver Approved:
 Waiver Denied:
 Partial Waiver Approved:
 Revised Participation Goal: _____ %

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

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

PROJECT ID: S216-404A

**Demolition of DSNY Facilities at Gansevoort Peninsula
4 Bloomfield Street
Manhattan 10004**

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: _____ Bidder's Fax Number: _____

Bidder's Email 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: _____

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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 17 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 shall mean the individual bidder, firm, partnership or corporation executing this bid).

6. Compliance Report

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

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

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

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

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

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

Section V: Vendor Certification and Required Affirmations:

I hereby:

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

Unit Price Schedule

Unit Price items: The items of work set forth in the Schedule below shall be performed by the contractor on a unit price basis for additional work. Such items of work shall be performed by the contractor only as directed in writing by the Commissioner.

The unit price for the items of work in the Schedule below are for EXTRA WORK ONLY i.e., work which is above and beyond that described in the Drawings and Specifications.

The bidder shall submit prices for all the items of work in the Schedule below. The bidder shall insert the total sum for all unit price items on the Bid Form, Item C - Allowance for Unit Prices. The unit price bid for each item shall include all costs and expense for the item, i.e., labor, material, overhead and profit. Quantities shown are approximate and for bid comparison purposes only. Actual amounts to be determined when the work is performed.

CSI #	Item #	Item Description	Quant.	Units	Unit Price	Total
026100	1	Difference between Transport and Disposal of Non-Hazardous Petroleum Contaminated Soil/Fill and Non-Hazardous Contaminated Soil/Fill	2000	TON		
026100	2	Difference between Transport and Disposal of Hazardous Waste Soil/Fill and Non-Hazardous Contaminated Soil/Fill	9000	TON		
265600	3	Furnish and install 25' light pole with LED fixture, solar panel, battery & foundation	1	EA		
316213	4	Furnished and install Steel H-Piles	3374	LF		
316213	5	Furnish and install Precast-Prestressed Concrete Piles	1960	LF		

Total Amount of Unit Price Work

* Insert Total amount of Unit Price Work on line C of Bid Form

*

Note: All quantities are approximate

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BID FORM

PROJECT ID: S216-404A

TOTAL BID PRICE: In the space provided below, the Bidder shall indicate the total bid price in figures.

- A. LUMP SUM PRICE - Total price for all labor and material for all required work, excluding items (B) and (C) set forth below. Total Price shall include all costs and expenses, i.e. labor, material overhead and profit for all the Work, described and shown in the drawings and specifications.

Total Price for
Material Sold and
Delivered

Total Price For
Labor

\$ _____ + \$ _____ Total Price for Item A= \$ _____

B. ALLOWANCE for Incidental Asbestos Abatement (Section 028013 of the Specifications) \$250,000.00

C. AMOUNT for Unit Prices (from page 13-1) for extra work items _____

TOTAL BID PRICE (Add A + B + C) \$ _____
(a/k/a BID PROPOSAL)

BIDDER'S SIGNATURE AND AFFIDAVIT

* **SUBCONTRACTOR IDENTIFICATION:** You MUST complete and submit the form entitled "Bidder's Identification of Subcontractors" (page 17) at the time you submit your bid. You must submit this form in a separate, sealed envelope (BID ENVELOPE #2). In the event an award of contract is not made to the Bidder, the Bidder hereby authorizes the Agency to shred the form entitled "Bidder's Identification of Subcontractors". _____ Yes _____ No

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

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BID FORM (TO BE NOTARIZED)

AFFIDAVIT WHERE BIDDERS 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 BIDDERS 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.
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 BIDDERS 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.

BIDDER'S IDENTIFICATION OF SUBCONTRACTORS

NOTICE TO BIDDERS

SUBMISSION: The Bidder must, at the time of the bid, submit the form on the next page ("BIDDER'S IDENTIFICATION OF SUBCONTRACTORS"). This form must be submitted in a separate, sealed envelope (BID ENVELOPE #2). Failure to do so will result in the disqualification of the bid as non-responsive.

Please be advised that pursuant to GML § 101(5) the Bidder is required to submit with its bid the names of subcontractors it intends to use to perform the following work on this contract, as well as the agreed-upon amount to be paid to each:

- plumbing and gas fitting;
- steam heating, hot water heating, ventilating and air conditioning apparatus; and
- electric wiring and standard illuminating fixtures.

NOTE: This project may not involve all of the above listed subcontractors. Please see the form on the next page which indicates the subcontractors required for this Project.

The list of subcontractors is to be submitted in a separate sealed envelope by completing the form on the next page entitled "Bidder's Identification of Subcontractors". This form provides for the identification of any subcontractors intended to be used in any of the three trades listed above. If bidder intends to use its own forces for any of the above listed work, bidder should so indicate on the form.

Failure to submit the completed form on the next page ("Bidder's Identification of Subcontractors") that includes the names of subcontractors and the agreed upon amounts to be paid to such subcontractors will render the bid non-responsive.

PLEASE NOTE: for any contract that is subject to M/WBE Participation Goals under Section 6-129 of the Administrative Code of the City of New York, if the bidder's intention to use its own forces to do any of the above-referenced work would result in Bidder's failure to attain the Participation Goals identified in the M/WBE Utilization Plan, the bid will be non-responsive unless the bidder requests and obtains a full or partial waiver of the Participation Goals (M/WBE Utilization Plan, Part III) in advance of bid submission. For more information see Notice to All Prospective Contractors, Participation by Minority-Owned and Women-Owned Business Enterprises in City Procurement.

After the low bid is announced, the sealed list submitted by the low bidder will be opened and the names of the subcontractors will be announced. The sealed lists of subcontractors submitted by all other bidders shall be maintained by the Agency unopened unless such bidder shall become the low bidder (e.g., the initial low bidder is found non-responsive). All unopened lists of subcontractors shall be returned to the bidders unopened after contract award, unless the bidder has given the agency permission to shred the form.

After bid submission, any change of subcontractor or agreed-upon amount to be paid to each shall require approval of the Agency upon a showing of a legitimate construction need which shall include, but not be limited to, a change in project specifications, a change in project material costs, a change to subcontractor status as determined pursuant to §222 (2)(e) of the Labor Law, or if the subcontractor has become otherwise unwilling, unable or unavailable to perform the subcontract.

BIDDER'S IDENTIFICATION OF SUBCONTRACTORS

Project ID: S216-404A

SUBMISSION: In addition to its Bid (Bid Envelope # 1), the Bidder must, at the time of the bid, complete and submit this form in a separate, sealed envelope (Bid Envelope # 2). To complete this form, the Bidder must identify the subcontractors it intends to use for the work listed below, as well as the dollar amount to be paid to each subcontractor. Failure to complete this form and submit it in a separate, sealed envelope will result in the disqualification of the bid as non-responsive.

The Bidder intends to use the following subcontractors. If the Bidder intends to do any of the work referenced below with its own forces, the Bidder should complete this form using its own name. If multiple subcontractors for any trade are proposed, Bidder may submit multiple copies of this form.

1. PLUMBING CONTRACTOR:

 (Print Name)

Agreed Amount To Be Paid To Subcontractor: \$ _____

2. ELECTRICAL CONTRACTOR:

 (Print Name)

Agreed Amount To Be Paid To Subcontractor: \$ _____

BIDDER'S SIGNATURE: The Bidder must sign this form in the space provided below:

Name of Bidder: _____

By: _____

Signature of Partner or Corporate Officer

Print Name: _____

Title: _____

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 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) _____ (L.S.)
Principal

By: _____

(Seal) _____
Surety

By: _____

BID BOND 3

ACKNOWLEDGEMENT 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

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

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

AFFIX ACKNOWLEDGEMENTS AND JUSTIFICATION OF SURETIES

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BID BREAKDOWN

Submission: Bidders are advised that the requirement to submit a Bid Breakdown applies to each contract for which an "X" is indicated before the word "Yes". If required, the bidder must submit, with its bid, a completed Bid Breakdown. Failure to provide a completed Bid Breakdown may result in rejection of the bid as non-responsive.

 X YES NO

Limitations on Use of Bid Breakdown:

Bidders are advised that the Bid Breakdown shall be used for bid analysis purposes only and shall not be binding for any other purposes under the Contract, including, without limitation, for payment purposes or in connection with a contractor claim for extra work. If the form for the Bid Breakdown does not include an item of work required by the Contract Documents, such omission shall have no effect whatsoever, nor shall it be used by the contractor in connection with a claim for extra work (i.e., work for which the contractor is entitled to a change order).

Instructions for Preparing Bid Breakdown:

- (A) The Bid Breakdown is set forth on the following pages of this Bid Booklet and is in accordance with the Construction Specification Institute (CSI) format. For all items of work listed in the Bid Breakdown, the bidder must indicate the price for labor and the price for material, as well as the estimated quantities required.
- (B) In preparing its Bid Breakdown, the bidder shall submit prices that include all costs for overhead and profit. Overhead shall include, without limitation, all costs in connection with the following: administration, management, superintendence, small tools, insurance, bonds, and provision of services or items required by the General Conditions [except for Security/Fire Guard Services and Temporary Heat]. If the Project requires Security/Fire Guard Services and/or Temporary Heat, such service(s) will be included as separate line items in the Bid Breakdown.
- (C) If an item is set forth in the Bid Breakdown, but is not included in the Contract Documents (Drawings, Specifications, General Conditions, and/or Addenda), the bidder is advised to leave the item blank and exclude the cost of the item from its grand total. In an attachment to its Bid Breakdown, the bidder shall provide a list of all items left blank.
- (D) If an item is not set forth in the Bid Breakdown, but is included in the Contract Documents (Drawings, Specifications, General Conditions, and/or Addenda), the bidder is advised to add the item to its Bid Breakdown and include the cost of the item in its grand total. In an attachment to its Bid Breakdown, the bidder shall provide a list of all items added.

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTORS BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder: _____

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
CONTRACT 1 - GENERAL CONSTRUCTION WORK								
Division 1	GENERAL REQUIREMENTS							
010000	Mobilization		LS					
	Temporary Power/ Electric		LS					
	Temporary Heat		LS					
	Site Security		HRS					
	Subtotal							
016000	Summary (Included w/ General Conditions)							
Division 2	EXISTING CONDITIONS							
020010	Summary of Environmental and Incinerator Decommissioning Work Sealed Incinerator Rooms interior cleaning pressure wash all floors, walls and ceilings throughout the sealed Incinerator Rooms, removal and disposal of residual wastes		SF					
	Subtotal							
020020	Environmental Health and Safety (Included w/ General Conditions)							
020030	Emergency Spill Control (Included w/ 026500 & 026500.10)							
020100	Protection of Existing Facilities (Included w/ 020350)							
020350	Maintenance and Protection of Traffic Flagger @ site entrance Crossing Guard		HRS HRS HRS					
	Subtotal							

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula
Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder: _____

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
024100	Building Demolition and Debris Removal							
	Remove existing							
	Snow plow storage racks (salvage if possible)		LF					
	Trailer and trailer container		EA					
	Aluminum movable guard shed		EA					
	Building demolition and debris removal							
	Salt Shed							
	Interior demolition complete up to 5'-0" below the ground level		CF					
	Foundation wall		CY					
	Foundation footing		CY					
	Foundation slab 11" thick		SF					
	Marine Transfer Station							
	Interior demolition complete up to the bottom of pile caps		CF					
	Wooden deck at road level		SF					
	Concrete deck at road level		SF					
	Pier deck at pilecap level		SF					
	Fender pier deck at pilecap level		SF					
	Railing on the wooden deck		LF					
	Pile caps - Small		EA					
	Pile caps - Medium		EA					
	Pile caps - Large		EA					
	Cutoff piles		EA					
	Trailer #1 46'-0" x 12'-6"		EA					
	Trailer #2 56'-0" x 12'-6"		EA					
	Trailer #3 56'-0" x 12'-6"		EA					
	Destructor Plant							
	Interior demolition of complete up to 5'-0" below the ground level		CF					
	Foundation slab		SF					
	Railing on roof		LF					
	Subtotal							

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NEW YORK CITY DEPARTMENT OF DESIGN + CONSTRUCTION

CONTRACTOR'S BID/BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

DDC ID: S216-404A

Bidder:

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
024113.23	Hydraulic Systems and Fuel Oil Pipe Removal							
	Remove existing							
	Fueling station		LS					
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Hydraulic lift equipment, portable and bolted (drain, clean & dispose of hydraulic lift equipment)		LS					
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Hydraulic hoist equipment/overhead crane (drain clean and dispose hydraulic equipment)		LS					
	Subtotal							
024119.16	Interior Demolition							
	Plumbing Demo							
	Destructor Plant							
	Remove fire pump		EA					
	Remove backflow preventor		EA					
	Remove oil interceptor		EA					
	Remove Floor drain		EA					
	Cap Pipe		LS					
	Remove Roof Drain		EA					
	Garage							
	Remove HW Heater		EA					

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NEW YORK CITY DEPARTMENT OF DESIGN + CONSTRUCTION

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Remove gas booster		EA					
	Remove manholes		EA					
	Remove pumps		EA					
	Cap Pipe		LS					
	Remove Floor drain		EA					
	Remove Roof Drain		EA					
	MTS							
	Remove Pipe		LF					
	Cap the pipe		LS					
	Remove sewage ejector		EA					
	Remove area drain		EA					
	Remove HWI		EA					
	Remove plumbing Fixtures		EA					
	Remove air compressor		EA					
	Remove domestic water heater		EA					
	HVAC Demolition							
	Destructor Plant							
	Remove unit heaters		EA					
	Remove vent pipe		LS					
	Remove Duct		LS					
	Remove boiler, piping, valves, breaching and controls		EA					
	Cap the pipe		LS					
	Remove exhaust fan		EA					
	Garage							
	Remove unit heaters		EA					
	Remove refrigeration pipe		LS					
	Remove make up air unit		EA					
	Remove ATC panel		EA					
	Remove HVU unit		EA					
	Remove Duct		LF					
	Remove exhaust fan		EA					
	Remove monitor panel		EA					
	Remove AC Unit		EA					

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder: _____

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	MTS							
	Remove unit heaters		EA					
	Remove HVAC Unit		EA					
	Remove Duct		LS					
	Cap the duct		LS					
	Remove exhaust fan		EA					
	Remove window AC Unit		EA					
	Subtotal							
024119.19	Electrical System Dismantlement during Abatement Phase							
	Site & Building Electrical Demolition							
	Existing Incoming Services-Beyond 5' of the Building line		LF					
	Distribution Equipment Removal							
	Switchboard removal-4000A		EA					
	Misc. Electrical panel removal@ 1st floor		LS					
	Pull box & Enclosure removal		EA					
	Transformer		EA					
	Disconnect switch-800A		EA					
	Disconnect switch		EA					
	Distribution Feeder Removal							
	1"-5" conduit removal		LF					
	Branch Circuit Removal [Per note #22-E001]							
	3#12-3/4" C Removal		LF					
	4#4/0-2 1/2"-Panel Feeders		LF					
	Distribution Equipment Demo @ Garage Floors (1st & 2nd)							
	Conduits Removal		LS					
	Switchboard removal		EA					
	Panel board Removal		EA					
	Pull box Removal		EA					
	Disconnect Switch Removal		EA					

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
025129.13	Sewer and Utility Cleanout							
	Remove existing							
	Sewer manhole removed to a depth 5'-0" and bottom slab punctured		EA					
	Plug abandoned 3'-6" x 2'-4" sewer at manhole location		EA					
	4'-0" x 2'-8" brick sewer		LF					
	5'-0" x 3'-0" brick sewer		LF					
	Sewer line from vault		LF					
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Purge and clean all on-site sewers		LS					
	Existing storm pipe to be flushed and cleaned		LF					
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Purging and cleaning of all abandoned fuel oil line pumps, drain and clean all lines associated with abandoned boiler and furnaces		LS					
	Reset grate elevation for inlets		EA					
	Subtotal							
026000	Contaminated Site Material and Waste Removal and Disposal							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Remove all CFC containing equipment		LS					
	Waste characterization sampling, laboratory analysis and consulting services		LS					

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NEW YORK CITY DEPARTMENT OF
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CONTRACTORS BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

Sponsor Agency: DSNY

DDC ID: S216-404A

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Remove CFC containing equipment		LS					
	Waste characterization sampling, laboratory analysis and consulting services		LS					
	Subtotal							
026100	Excavation and Removal of Contaminated Soil							
	Soil excavation Hazardous		CY					
	Extra cost for carting away hazardous material from excavation assume 15%		CY					
	Subtotal							
026500	Removal of Underground Storage Tanks							
	Remove 275 to 4000 Underground storage tanks (15 Total)		LS					
	Subtotal							
026500.10	Above Ground Storage Tank Removal and Disposal							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Propane Tanks (2 Full, 8 Empty)		EA					
	Remove all propane tanks		LS					
	Remove and dispose 275 to 550 gallon ASTs		LS					
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Remove ASTs (purge, clean, remove & dispose of steel ASTs and piping		EA					
	Subtotal							

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

DDC ID: S216-404A

Bidder:

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
027100	Water Treatment System							
	Water Treatment System		LS					
	Federal, state, city law, rule and / or regulation fees related to asbestos abatement		LS					
	Subtotal							
028120	Removal and Disposal of Heavy Metals Containing Material							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	High-Pressure sodium lights (transport & dispose)		Container					
	Labor costs to collect and stage sodium lights		LS					
	Halide lights (transport and dispose)		Container					
	Labor costs to collect and stage halide lights		LS					
	Mercury switches/gauges (transport & dispose)		Container					
	Labor costs to collect and stage mercury items		LS					
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	High pressure sodium lights (transport & dispose)		Container					
	Labor costs to remove and stage sodium lights		LS					
	Halide lights (transport and dispose)		Container					
	Labor costs to remove and stage halide lights		LS					
	Mercury switches/gauges (transport & dispose)		Container					
	Mercury switches/gauges (transport & dispose)		Container					
	Labor Costs to remove and stage mercury items		LS					
	Subtotal							

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St. & Gansevoort St.

Bidder: _____

Sponsor Agency: DSNY

DDC ID: S216-404A

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
028130	Removal of Chlorinated Fluorocarbons							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Fluorescent Lights - 8 ft long(4-Light Fixture,2-Light Fixture+Circular)		EA					
	Fluorescent Lights - 4 ft long(4-Light Fixture&2-Light Fixture)		EA					
	Subtotal							
028213	Asbestos Abatement							
	M2 Garage							
	Containment setup (Decon unit, negative air equipment and containment barriers)		LS					
	Windows (Glazing and caulk)		EA					
	Door Frames with caulk		EA					
	Caulking		LF					
	Roof base flashing		SF					
	Roof Tar		SF					
	Roof membrane		SF					
	Pipe insulation		LF					
	Floor tile and mastic		SF					
	Cove base and mastic		SF					
	Air monitoring Consultant		DAY					
	Marine Transfer Station							
	Containment setup Decon unit, negative air equipment and containment barriers)		LS					
	Windows (Glazing and caulk)		EA					
	Door frames with caulk		EA					
	Roof vapor barrier		SF					
	Pipe insulation sleeves through wall penetration		SF					
	Tar on wooden pier columns		SF					
	Air monitoring consultant		DAY					

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder: _____

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Ramp							
	Containment setup (Devon unit, negative air equipment and containment barriers)		LS					
	Expansion joint caulk		LF					
	Pipe insulation		LF					
	Air monitoring consultant		DAY					
	Destructor Plant							
	Containment setup (Decon unit, negative air equipment and containment barriers)		LS					
	Abatement dismantlement of furnaces, boilers and waste heat flue (refractory brick, mortar etc..)		CY					
	Duct Insulation		SF					
	Pipe Insulation		LF					
	Pipe Flange gaskets		SF					
	Canvas gasket at fan casing flange		SF					
	Wire Insulation		LF					
	Electrical Backer Boards		SF					
	Rope gasket at furnace door and feed hopper		SF					
	Canvas Vibration damper		SF					
	Canvas Vibration damper		DAY					
	Spandrel Flashing Tar		SF					
	Subtotal							
028313	Lead Hazard Management (Included w/ 028433)							
028416	Removal of Universal Waste (Included w/ 025100, 025139, 026500, 028120, & 028130)							

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
028433	Removal of PCB-Bearing Materials							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	PCBs containing equipment		LS					
	Suspected PCBs containing transformer (live) (clean wrap remove and dispose)		LS					
	PCBs containing light ballasts (transport and dispose of PCBs ballasts)		DRUM					
	Labor Costs to collect and stage PCB ballasts		LS					
	Remove and dispose of PCB containing caulk		LS					
	Summary of environmental and inclinerator decommissioning work							
	Sealed Incinerator Rooms							
	Furnace conveyor gear and chain drives dispose of as PCB containing materials		EA					
	Furnace drives, motor and mounts remove and dispose of as PCB containing materials		EA					
	Transformers/PCBs containing equipment		Container					
	PCBs light ballasts (transport & dispose)		DRUM					
	Labor costs to remove and stage ballasts		LS					
	Clean Petroleum/PCBs impacted surfaces		SF					
	Remove and dispose of all PCBs containing caulk		LS					
	Subtotal							
028600	Removal of Drummed Waste and Decontamination Water							
	Environmental health and safety							
	Environmental Cleanup							
	M2, M5, Salt Shed, MTS							
	Truck Wash - 265 Gallon		EA					

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTORS BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNV Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder: _____

DDC ID: S216-404A
Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	55 gallon drums (containing anti-freeze, motor oil transmission oil, grease, cleaning products, etc.)		EA					
	Steel cans (same contents as above and unknown)		EA					
	Labor costs to stage and move containers		LS					
	Summary of environmental and incinerator decommissioning work							
	Sealed Incinerator Rooms							
	Est 100-gal empty storage vessel near electric room		EA					
	Est 70-gal empty mixing vessel		EA					
	55 gallon drums -contents unknown		EA					
	Steel cans - contents unknown		EA					
	Oil in equipment (clean wrap, dispose of oil reservoir and lines as PCBs containing waste)		EA					
	Subtotal							
Division 3	CONCRETE							
033129	Marine Concrete							
	Bulkhead							
	Section A							
	6" thick protective concrete encasement 12' high		SF					
	Section B							
	6" thick protective concrete encasement 12' high		SF					
	Concrete Pile Cap 11'6" x 3'6" x 2'6"		CY					
	Concrete Sheet Pile Cap 1' thk		CY					
	Roughen surfaces between pile and pile cap		EA					
	Hand Picked mortar pitched away from sheet to facilitate drainage		LF					
	Subtotal							
034100	Precast and Prestressed Concrete							
	Precast prestressed concrete plank with concrete topping		SF					
	Concrete topping above planks		SF					
	Subtotal							

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Sponsor Agency: DSNY

DDC ID: S216-404A

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
Division 5	STRUCTURAL STEEL							
051200	Structural Steel Framing							
	Bulkhead							
	Section A							
	4' high Guard rail (Not Required)							
	Section B							
	4' high Guard rail		LF					
	Neoprene Bearing Pad (3/8" thick) between pilecap and plank		SF					
	Subtotal							
Division 26	ELECTRICAL							
265600	Exterior Light Pole		EA					
	25' light pole with LED light fixture, solar panel & battery		EA					
	Foundation for above							
	Subtotal							
Division 31	EARTHWORK							
312000	Earth Moving							
	Remove existing							
	Electric line		LF					
	6" water mains		LF					
	8" water mains		LF					
	12" water mains		LF					
	Telephone line		LF					

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID/BREAKDOWN FORM

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

CONTRACT 1 - General Construction

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

DDC ID: S216-404A
Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Gas line to be removed to property line		LF					
	Telecom manholes to be removed		EA					
	4' high chain-link fence to be removed including footings & gates		LF					
	5' high chain-link fence to be removed including footings & gates		LF					
	8' high chain-link fence to be removed including footings & gates		LF					
	Retaining wall including footing to be removed		LF					
	Concrete slab to be removed		SF					
	Asphalt pavement to be removed		SF					
	Existing cobblestones in area to be removed and stockpiled for future use by client		LS					
	Concrete jersey barriers to be stockpiled for reuse		LF					
	Bollards to be removed		EA					
	9'-0" dia plastic tank including footing to be demolished		EA					
	Ramp							
	Demolition of ramps and roads		SF					
	Demolition of ramp walls		LF					
	Trees		EA					
	Bulkhead							
	Section A							
	Remove existing							
	Concrete Curb 18"x12"		LF					
	5" Cobble Stone		SF					
	6" Concrete Slab		SF					
	Concrete Sea Wall		CY					
	Section B							
	Remove existing							
	Concrete Curb 18"x12"		LF					
	5" Cobble Stone		SF					
	6" Concrete Slab		SF					
	Concrete Sea Wall		CY					
	3"x6" Timber Decking		SF					
	12"x12" timber pile cap		LF					
	12"x12" timber pile Horizontal cap		LF					

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NEW YORK CITY DEPARTMENT OF DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Bulkhead							
	Section A							
	Soil Excavation		CY					
	Section B							
	Soil Excavation		CY					
	Subtotal							
312200	Site Grading							
	Site grading to proposed levels		SF					
	Subtotal							
312300	Backfill of Building and Utility Removal Areas							
	Salt Shed							
	9" gravel / crushed stone		CY					
	5 1/2" coarse sand material		CY					
	Mirafi 160N geo-fabric		SY					
	Cart away debris to a distance of 50 miles from site		CY					
	Marine Transfer Station							
	Cart away debris to a distance of 50 miles from site		CY					
	Destructor Plant							
	9" gravel / crushed stone		CY					
	5 1/2" coarse sand material		CY					
	38" coarse sand material		CY					
	Mirafi 160N geo-fabric		SY					
	Cart away debris to a distance of 50 miles from site		CY					
	Site Area							
	Excavation upto 5'-0" below ground		CY					

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTORS BID BREAKDOWN FORM
CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

DDC ID: S216-404A
Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	9" gravel / crushed stone		CY					
	51" coarse sand material		CY					
	38" coarse sand material		CY					
	Miraafi 160N geo-fabric		SY					
	Cart away debris to a distance of 50 miles from site		CY					
	Ramp							
	9" gravel / crushed stone		CY					
	51" coarse sand material		CY					
	Miraafi 160N geo-fabric		SY					
	Cart away debris to a distance of 50 miles from site		CY					
	Clean fill @ hazardous excavation		CY					
	Dewatering		LS					
	Bulkhead							
	Section A							
	Backfill							
	Geo Textile fabric		CY					
	3/4" crushed stone fill behind sheet pile		SY					
	Section B							
	Backfill							
	Geo Textile fabric		CY					
	Subtotal		SY					
	Subtotal							
312323.13	Backfill Material Environmental Testing Requirements							
	Verify bottom slab of receiving pit is broken (26' x 167')		LS					
	Subtotal							
312500	Soil Erosion and Sediment Control							
	Erosion Control							
	Filter fabric inlet protection		EA					
	Silt fence		LF					

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
	Stabilized construction entrance pad		SF					
	Turbidity curtain 6' high		LF					
	Subtotal							
316213	Prestressed Concrete Piles							
	Section B							
	24" square precast prestressed pile, 190' deep		LF					
	Subtotal							
316216.13	Steel Sheet Piling							
	Bulkhead							
	Section A							
	Tie Back 40' long		EA					
	8" HDPE pipe sleeve covering tie back		LF					
	Sheet pile 58' deep @ sea wall		SF					
	Sheet pile 10' deep @ anchor wall		SF					
	Painting @ sheet pile		SF					
	Section B							
	Sheet pile 52.5' deep		SF					
	Painting @ sheet pile		SF					
	Subtotal							
Division 32	EXTERIOR IMPROVEMENTS							
321200	Asphalt Paving							
	3" bituminous concrete top course		SY					
	7" bituminous stabilized base course		SY					
	12" densely graded aggregate subbase		CY					
	Subtotal							

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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

CONTRACTOR'S BID BREAKDOWN FORM

CONTRACT 1 - General Construction

Project: Demolition of DSNY Facilities at Gansevoort Peninsula

Location: West of Route 9A and between Bloomfield St & Gansevoort St.

Bidder:

DDC ID: S216-404A

Sponsor Agency: DSNY

CSI Number	Description	Quantity	Unit	Unit Cost of Material	Total Cost of Material	Unit Cost of Labor	Total Cost of Labor	Total Cost: Materials and Labor
321613	Concrete Curbs							
	Regular concrete curbs		LF					
	Depressed concrete curb		LF					
	Subtotal							
323100	Temporary and Permanent Chain Link Fence and Gates							
	Temporary 5'-6" H chain link fence		LF					
	Concrete jersey barrier below temporary fence		LF					
	Temporary 8' H x 10' W chain-link gate		EA					
	Temporary 8' H x 24' W chain-link gate		EA					
	Temporary 8' H x 30' W chain-link gate		EA					
	Permanent 5'-6" H chain link fence		LF					
Concrete jersey barrier below permanent fence		LF						
Move temporary 5'-6" H chain link fence to permanent location		LF						
Move concrete jersey barrier to permanent location		LF						
Move 8' H x 24' W chain-link gate to permanent location		EA						
	Subtotal							
TOTAL CONTRACT 1 - GENERAL CONSTRUCTION WORK								

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DESCRIPTION AND LOCATION OF WORK:

Demolition of DSNY Facilities at Gansevoort Peninsula
 4 Bloomfield Street
 Manhattan, NY 10004
 E-PIN: 85014B0124 / DDC PIN: 8502014TR0003C

DOCUMENTS AVAILABLE AT:

Department of Design and Construction, Contract Section
 30-30 Thomson Avenue – First Floor, Long Island City, NY 11101

SUBMISSION OF BIDS BEFORE BID OPENING:**TIME TO SUBMIT:**

On or Before: **THURSDAY, MAY 22, 2014**

BIDS MUST BE CLOCKED IN PRIOR TO BID OPENING

PLACE TO SUBMIT:

Department of Design and Construction, Contract Section (located behind Security Desk)
 30-30 Thomson Avenue – First Floor, Long Island City, NY 11101

BID OPENING:

PLACE OF BID OPENING:	Department of Design and Construction Contract Section 30-30 Thomson Avenue – First Floor Long Island City, NY 11101
DATE AND HOUR:	THURSDAY, MAY 22, 2014 @ 2:00 pm
	LATE BIDS WILL NOT BE ACCEPTED

PRE-BID CONFERENCE:

PLACE	Department of Design and Construction 30-30 Thomson Avenue, 3 rd Floor Training Room Long Island City, NY 11101
SITE WALK THROUGH	DSNY Facilities at Gansevoort Peninsula 4 Bloomfield Street Manhattan, NY 10004
DATE AND HOUR	THURSDAY, MAY 1, 2014 AT 10:00 AM AND 2:00 PM
MANDATORY OR OPTIONAL	OPTIONAL

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 excess of \$1,000,000.00. Performance and Payment Security shall each be in an amount equal to 100% of the Contract Price

AGENCY CONTACT PERSON:

Lorraine Holley, 30-30 Thomson Avenue – First Floor, Long Island City, Queens, NY 11101
 Telephone (718) 391-2200 or (718) 391-2601 Fax: (718) 391-2615

**BID BOOKLET
PART B**

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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 _____ YES _____ NO

2. Type(s) of Construction Work

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

3. Experience Modification Rate:

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

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

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

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

4. OSHA Information:

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

___ YES ___ NO Contractor has had an incident requiring OSHA notification within 8 hours (i.e., fatality, or hospitalization of three or more employees).

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

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

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

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

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

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

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

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

5. Safety Performance on Previous DDC Project(s)

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

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

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

Date: _____

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

Title: _____

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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, the bidder must submit such information 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 which must be submitted.

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 28 through 30 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

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**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.

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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: _____

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**DIRECTIONS: Please execute two originals (both with original signature).
Please forward directly to the agency (not M.O.C.S.).**

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

**DIRECTIONS: Please execute two originals (both with original signature).
Please forward directly to the agency (not M.O.C.S.).**

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:

CITY OF NEW YORK

DIVISION OF LABOR SERVICES

CONSTRUCTION EMPLOYMENT REPORT

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

CONSTRUCTION EMPLOYMENT REPORT

GENERAL INFORMATION

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

PART I: CONTRACTOR/SUBCONTRACTOR INFORMATION

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

13. Number of employees in your company: _____

14. Contract information:

(a) _____ (b) _____
Contracting Agency (City Agency) Contract Amount

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

(e) _____ (f) _____
Projected Commencement Date Projected Completion Date

(g) Description and location of proposed contract:

15. Has your firm been reviewed by the Division of Labor Services (DLS) within the past 36 months and issued a Certificate of Approval? Yes___ No___

If yes, attach a copy of certificate.

16. Has DLS within the past month reviewed an Employment Report submission for your company and issued a Conditional Certificate of Approval? Yes___ No___

If yes, attach a copy of certificate.

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

17. Has an Employment Report already been submitted for a different contract (not covered by this Employment Report) for which you have not yet received compliance certificate?
Yes___ No___ If yes,

Date submitted: _____

Agency to which submitted: _____

Name of Agency Person: _____

Contract No: _____

Telephone: _____

18. Has your company in the past 36 months been audited by the United States Department of Labor, Office of Federal Contract Compliance Programs (OFCCP)? Yes___ No___

If yes,

(a) Name and address of OFCCP office.

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

Yes ___ No ___

If yes, attach a copy of such certificate.

(c) Were any corrective actions required or agreed to? Yes ___ No ___

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

(d) Were any deficiencies found? Yes ___ No ___

If yes, attach a copy of such findings.

19. Is your company or its affiliates a member or members of an employers' trade association which is responsible for negotiating collective bargaining agreements (CBA) which affect construction site hiring? Yes ___ No ___

If yes, attach a list of such associations and all applicable CBA's.

PART II: DOCUMENTS REQUIRED

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

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

21. To comply with the Immigration Reform and Control Act of 1986 when and of whom does your firm require the completion of an I-9 Form?

- | | |
|--|----------------|
| (a) Prior to job offer | Yes ___ No ___ |
| (b) After a conditional job offer | Yes ___ No ___ |
| (c) After a job offer | Yes ___ No ___ |
| (d) Within the first three days on the job | Yes ___ No ___ |
| (e) To some applicants | Yes ___ No ___ |
| (f) To all applicants | Yes ___ No ___ |
| (g) To some employees | Yes ___ No ___ |
| (h) To all employees | Yes ___ No ___ |

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

23. Does your firm or any of its collective bargaining agreements require job applicants to take a medical examination? Yes ___ No ___

If yes, is the medical examination given:

- | | |
|-----------------------------------|----------------|
| (a) Prior to a job offer | Yes ___ No ___ |
| (b) After a conditional job offer | Yes ___ No ___ |
| (c) After a job offer | Yes ___ No ___ |
| (d) To all applicants | Yes ___ No ___ |
| (e) Only to some applicants | Yes ___ No ___ |

If yes, list for which applicants below and attach copies of all medical examination or questionnaire forms and instructions utilized for these examinations.

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

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

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

___ Minorities and Women

___ Individuals with handicaps

___ Other. Please specify _____

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

If yes, please attach a copy of this policy.

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

27. Has any employee, within the past three years, filed a complaint pursuant to an internal grievance procedure or with any official of your firm with respect to equal employment opportunity? Yes___ No___

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

28. Has your firm, within the past three years, been named as a defendant (or respondent) in any administrative or judicial action where the complainant (plaintiff) alleged violation of any anti-discrimination or affirmative action laws? Yes___ No___

If yes, attach a log. See instructions.

29. Are there any jobs for which there are physical qualifications? Yes___ No___

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

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

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

SIGNATURE PAGE

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

Contractor's Name

Name of person who prepared this Employment Report Title

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

Telephone Number

Signature of authorized official Date

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

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

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

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

Only original signatures accepted.

Sworn to before me this _____ day of _____ 20 _____

Notary Public

Authorized Signature

Date

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

1. Do you plan to 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.	Hisp.	Asian	Native Amer.	White Non Hisp.	Black Non Hisp.	White Non Hisp.	Black Non Hisp.	Hisp.	Asian	Native Amer.						
J																				
H																				
A																				
TRN																				
TOT																				

Total (Col. #1-10): _____

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

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

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

FORM B: PROJECTED WORKFORCE

Trade: _____

Union Affiliation, if applicable

Total (Col. #1-10): _____

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

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

MALES

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

FEMALES

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

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

FORM C: CURRENT WORKFORCE

TRADE CLASSIFICATION CODES

- (J) Journeylevel Workers
- (H) Helper
- (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.

MALES

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

FEMALES

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

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

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

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

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

FORM C: CURRENT WORKFORCE

Trade: _____

Union Affiliation, if applicable _____

Total (Col. #1-10): _____

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

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

MALES

(1) White Non Hisp.	(2) Black Non Hisp.	(3) Hisp.	(4) Asian	(5) Native Amer.

J

H

A

TRN

TOT

FEMALES

(6) White Non Hisp.	(7) Black Non Hisp.	(8) Hisp.	(9) Asian	(10) Native Amer.

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

FMS ID: S216-404A



**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

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

Contract for Furnishing all Labor and Material Necessary and Required for:

CONTRACT NO. 1 GENERAL CONSTRUCTION WORK

**Demolition of DSNY Facilities at
Gansevoort Peninsula**

**LOCATION: 4 Bloomfield Street
BOROUGH: Manhattan 10004
CITY OF NEW YORK**

Contractor _____

Dated _____, 20____

Entered in the Comptroller's Office

First Assistant Bookkeeper _____

Dated _____, 20____





PROJECT ID:

S216-404A

**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

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

VOLUME 2 OF 3

**PROJECT LABOR AGREEMENT
INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
SCHEDULE OF PREVAILING WAGES
GENERAL CONDITIONS**

FOR FURNISHING ALL LABOR AND MATERIALS
NECESSARY AND REQUIRED FOR THE PROJECT

**Demolition of DSNY Facilities at
Gansevoort Peninsula**

LOCATION:
BOROUGH:
CITY OF NEW YORK

4 Bloomfield Street
Manhattan 10004

CONTRACT NO. 1

GENERAL CONSTRUCTION WORK

DSNY

Syska - Hennessy Group

Date: February 20, 2014

174-088





**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

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

VOLUME 2 OF 3

**PROJECT LABOR AGREEMENT
INFORMATION FOR BIDDERS
CONTRACT
PERFORMANCE AND PAYMENT BONDS
SCHEDULE OF PREVAILING WAGES
GENERAL CONDITIONS**

FOR FURNISHING ALL LABOR AND MATERIALS
NECESSARY AND REQUIRED FOR THE PROJECT



NOTICE:

THIS CONTRACT IS NOT SUBJECT TO THE REQUIREMENTS OF THE WICKS LAW FOR SEPARATE PRIME CONTRACTORS

This contract is subject to a Project Labor Agreement ("PLA"). In accordance with the Labor Law, the requirements of the Wicks Law for separate prime contractors do not apply to any project that is covered by a PLA. Accordingly, the requirements of the Wicks Law for separate prime contractors do not apply to this Project. However, the Contract Documents for this Project (General Conditions, Drawings and Specifications) were prepared as if the requirements of the Wicks Law for separate prime contractors did apply. To correct this situation, the bidder is advised that the Contract Documents are revised as set forth below.

- (A) Delete any and all references to separate responsibilities, separate specifications, separate drawings and/or separate contracts for the four subdivisions of the work listed below:
- General Construction Work (Contract No. 1)
 - Plumbing Work (Contract No. 2)
 - HVAC & Fire Protection Work (Contract No. 3)
 - Electrical Work (Contract No. 4)
- (B) Revise all such references to indicate that:
- The Project consists of a single contract, the Contract for General Construction Work.
 - All responsibilities and obligations in the Contract Documents assigned to the separate Contractors for the four subdivisions of the work listed above are the responsibility of the Contractor for General Construction Work.
 - The Contractor for General Construction Work is responsible for the performance of all required work for the Project as set forth in the Contract Documents, including all responsibilities and obligations assigned to the separate Contractors for the four subdivisions of the work listed above.
- (C) Revise any and all references to Contracts Nos. 2, 3 and 4 to refer to Contract No. 1.
- (D) Revise the specifications for plumbing work to require Contractor for General Construction Work to engage a Licensed Plumber to perform the required plumbing work.
- (E) Revise the specifications for electrical work to require Contractor for General Construction Work to engage a Licensed Electrician to perform the required electrical work.

NOTICE:

THIS CONTRACT IS SUBJECT TO A PROJECT LABOR AGREEMENT

This contract is subject to the attached Project Labor Agreement ("PLA") entered into between the City and the Building and Construction Trades Council of Greater New York ("BCTC") affiliated Local Unions. By submitting a bid, the Contractor agrees that if awarded the Contract the PLA is binding on the Contractor and all subcontractors of all tiers. The bidder to be awarded the contract will be required to execute the attached Letter of Assent prior to award. Contractor shall include in any subcontract a requirement that the subcontractor, and sub-subcontractors of all tiers, become signatory to and bound to the PLA with respect to the subcontracted work. Contractor will also be required to have all subcontractors of all tiers execute the attached Letter of Assent prior to such subcontractors performing any work on the Project. Bidders are advised that the City of New York and City agencies have entered into multiple PLAs. The terms of each PLA, while similar, are not identical. All bidders should carefully read the entire PLA that governs this Contract.

To the extent that the terms of the PLA conflict with any other terms of the invitation for bids, including the Standard Construction Contract, the terms of the PLA shall govern. For example, the PLA section that authorizes the scheduling of a four-day work, ten hours per day on straight time at the commencement of the job, PLA Article 12, section 1, overrides the Standard Construction Contract's provision concerning a five-day work week with a maximum of eight hours in a day, Standard Construction Contract Article 37.2.1. Where, however, the invitation for bids, including the Standard Construction Contract, requires the approval of the City/Department, the PLA does not supersede or eliminate that requirement.

In addition to the various provisions regarding work rules, Contractors should take special note of the requirement that Contractors and Subcontractors make payments to designated employee benefit funds. See PLA Article 11, Section 2. The PLA also contains provisions for what occurs when a contractor or a subcontractor fails to make required payments into the benefit funds, including potentially the direct payment by the City to the benefit fund of monies owed and corresponding withholding of payments to the Contractor. See PLA Article 11, Section 2. The City strongly advises Contractors to read these provisions carefully and to include appropriate provisions in subcontracts addressing these possibilities.

This Contract is subject to the apprenticeship requirements of Labor Law §222 and to apprenticeship requirements established by the Department pursuant to Labor Law §816-b. Please be advised that the involved trades have apprenticeship programs that meet the statutory requirements of Labor Law §222(e) and the requirements set by the Department pursuant to Labor Law §816-b, contractors and subcontractors who agree to perform the Work pursuant to the PLA are participating in such apprenticeship programs within the meaning of Labor Law §222(e) and the Department's directive.

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 entitled the "Subcontractor Utilization Plan", and are detailed in a separate Notice to Prospective Contractors included with this bid package. If such requirements are included with this Contract, the City strongly advises Contractors to read those provisions, as well as PLA Article 4, Section 2(C), carefully. 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.

The local collective bargaining agreements (CBAs) that are incorporated into the PLA as PLA Schedule A Agreements are available on computer disk from the Department's Contract Officer upon the request of any prospective bidder. Please note that the "PLA Schedule A" is distinct from the Department's Schedule A that is a part of this invitation for bids.

A contact list for the participating unions is set forth after the FAQs.

Below are answers to frequently asked questions (FAQs) about this PLA:

Q1. Does a contractor need to be signatory with the unions in the NYC Building and Construction Trades Council in order to bid on projects under the PLA?

A. No, any contractor may bid by signing and agreeing to the terms of the PLA. The contractor need not be signatory with these unions by any other labor agreement or for any other project.

Q2. Does a contractor agreeing to the PLA and signing the Letter of Assent create a labor agreement with these unions outside of the project covered by the PLA?

A. No, the PLA applies only to those projects that the Contractor agrees to perform under the PLA and makes no labor agreement beyond those projects.

Q3. Does the PLA affect the subcontractors that a bidder may utilize on the project?

A. Subject to the Department's approval of subcontractors pursuant to Article 17 of the Standard Construction Contract, a contractor may use any subcontractor, union or non-union, as long as the subcontractor signs and agrees to the terms of the PLA.

Q4. Are bidders required to submit Letters of Assent signed by proposed subcontractors with their bid in order to be found responsive?

A. No, bidders do not have to submit signed Letters of Assent from their subcontractors with their bid. Subcontractors, however, will be required to sign the letter of Assent prior to being approved by the Department.

Q5. May a contractor or subcontractor use any of its existing employees to perform this work?

A. Generally labor will be referred to the contractor from the respective signatory local unions. See PLA Article 4. However, contractors and subcontractors may continue to use up to 12% of their existing, qualifying labor force for this work, in accordance with the terms of PLA Article 4, Section 2B. Certified MWBEs for which participation goals are set pursuant to NYC Administrative Code §6-129 that are not signatory to any Schedule A CBAs may use their existing employees for the 2nd, 4th, 6th and 8th employee needed on the job if their contracts are valued at or under \$500,000. For contracts valued at above \$500,000 but under \$1,000,000, such certified MWBEs may use their own employees for the 2nd, 5th and 8th employees needed on the job in accordance with the provisions of PLA Article 4, Section 2C. If additional workers are needed by these MWBEs, the additional workers will be referred to the contractor from the signatory local unions subject to the contractor's right to meet 12% of the additional needs with its existing, qualifying employees.

Q6. Must the City set MWBE participation goals for the particular project or contract in order for a certified MWBE to utilize the provisions of PLA Article 4, Section 2C?

A. No. PLA Article 4, Section 2(C) specifies what categories of MWBEs are eligible to take advantage of this provision (i.e., those MWBEs for which the City is authorized to set participation goals under §6-129). For purposes of section 2(C), it is not necessary for the project to be subject to §6-129 or for the City to have actually set participation goals for the particular contract or project. The result is the same where a project receives State funding and therefore is subject to the requirements of Article 15-A of the Executive Law.

Q7. May a contractor bring in union members from locals that are not signatory unions?

A. Referrals will be from the respective signatory locals and/or locals listed in schedule A of the PLA. Contractors may utilize 'traveler provisions' contained in the local collective bargaining agreements (local CBAs) where such provisions exist and/or in accordance with the provisions of PLA Article 4, Section 2.

Q8. Does a non-union employee working under the PLA automatically become a union member?

A. No, the non-union employee does not automatically become a union member by working on a project covered by the PLA. Non-union employees working under the PLA are subject to the union security provisions (i.e., union dues/agency shop fees) of the local CBAs while on the project. These employees will be enrolled in the appropriate benefit plans and earn credit toward various union benefit programs. See PLA Article 4, Section 6 and Article 11.

Q9. Are all contractors and subcontractors working under the PLA, including non-union contractors and contractors signatory to collective bargaining agreements with locals other than those that are signatories to the PLA, required to make contributions to designated employee benefit funds?

A. Contractors and subcontractors working under the PLA will be required to contribute on behalf of all employees covered by the PLA to established jointly trustee employee benefit funds designated in the Schedule A CBAs and required to be paid on public works under any applicable prevailing wage law. See PLA Article 11, Section 2. The Agency may withhold from amounts due the contractor any amounts required to be paid, but not actually paid into any such fund by the contractor or a subcontractor. See PLA Article 11, Section 2 C.

Q10. What happens if a contractor or subcontractor fails to make a required payment to a designated employee benefit fund?

A. The PLA sets forth a process for unions to address a contractor or a subcontractor's failure to make required payments. The process includes potentially the direct payment by the City to the benefit fund of monies owed and the corresponding withholding of payments to the Contractor. See PLA Article 11, Section 2. The City strongly advises Contractors to read these provisions carefully and to include appropriate provisions in subcontracts addressing these possibilities.

Q11. Does signing on to the PLA satisfy the Apprenticeship Requirements established for this bid?

A. Yes. By agreeing to perform the Work subject to the PLA, the bidder demonstrates compliance with the apprenticeship requirements imposed by this invitation for Bids.

Q12. Does the PLA provide a standard work day across all the signatory trades?

A. Yes, all signatory trades will work an eight (8) hour day, Monday through Friday with a day shift at straight time as the standard work week. The PLA also permits a contractor to schedule a four day [within Monday through Friday] work week, ten (10) hours per day at straight time if announced at the commencement of the project. See PLA Article 12, Section 1. This is an example where the terms of the PLA override provisions of the Standard Construction Contract (compare with section 37.2 of the Standard Construction Contract).

Q13. Does the PLA create a common holiday schedule for all the signatory trades?

A. Yes, the PLA recognizes eight (8) common holidays. See PLA Article 12, Section 4.

Q14. Does the PLA provide for a standard policy for 'shift work' across all signatory trades?

A. Yes, second and third shifts may be worked with a standard 5% premium pay. In addition, a day shift does not have to be scheduled in order to work the second and third shifts at the 1.05 hourly pay rate. See PLA Article 12, Section 3.

Q15. May the Contractor schedule overtime work, including work on a weekend?

A. Yes, the PLA permits the Contractor to schedule overtime work, including work on the weekends. See PLA Article 12, Sections 2, 3, and 5. To the extent that the Agency's approval is required before a Contractor may schedule or be paid for overtime, that approval is still required notwithstanding the PLA language.

Q16. Are overtime payments affected by the PLA?

A. Yes, all overtime pay incurred Monday through Saturday will be at time and one half (1 ½). There will be no stacking or pyramiding of overtime pay under any circumstances. See PLA Article 12, Section 2. Sunday and holiday overtime will be paid according to each trades CBA.

Q17. Are there special provisions for Saturday work when a day is 'lost' during the week due to weather, power failure or other emergency?

A. Yes, when this occurs the Contractor may schedule Saturday work at weekday rates. See PLA Article 12, Section 5.

Q18. Does the PLA contain special provisions for the manning of Temporary Services?

A. Yes. Where temporary services are required by specific request of the agency or construction manager, they shall be provided by the contractor's existing employees during working hours in which a shift is scheduled for employees of the contractor. The need for temporary services during non-working hours will be determined by the agency or construction manager. There will be no stacking of trades on temporary services. See PLA Article 15.

Q19. What do the workers get paid when work is terminated early in a day due to inclement weather or otherwise cut short of 8 hours?

A. The PLA provides that employees who report to work pursuant to regular schedule and not given work will be paid two hours of straight time. Work terminated early for severe weather or emergency conditions will be paid only for time actually worked. In other instances where work is terminated early, the worker will be paid for a full day. See PLA Article 12, Sections 6 and 8.

Q20. Should a local collective bargaining agreement [local CBA] expire during the project will a work stoppage occur on a project subject to the PLA?

A. No. All the signatory unions are bound by the 'no strike' agreement as to the PLA work. Work will continue under the PLA and the otherwise expired local CBA(s) until the new local CBA(s) are negotiated and in effect. See PLA Articles 7 and 19.

Q21. May a contractor working under the PLA be subject to a strike or other boycott activity by a signatory union at another site while the contractor is a signatory to the PLA?

A. Yes. The PLA applies ONLY to work under the PLA and does not regulate labor relations at other sites even if those sites are in close proximity to PLA work.

Q22. If a contractor has worked under other PLAs in the New York City area, are the provisions in this PLA generally the same as the others?

A. While Project Labor Agreements often look similar to each other, and particular clauses are often used in multiple agreements, each PLA is a unique document and should be examined accordingly.

Q23. What happens if a dispute occurs between the contractor and an employee during the project?

A. The PLA contains a grievance and arbitration process to resolve disputes between the contractor and the employees. See PLA Article 9.

Q24. What happens if there is a dispute between locals as to which local gets to provide employees for a particular project or a particular aspect of a project?

A. The PLA provides for jurisdictional disputes to be resolved in accordance with the NY Plan. See PLA Article 10. A copy of the NY Plan is available upon request from the Department. The PLA provides that work is not to be disrupted or interrupted pending the resolution of any jurisdictional dispute. The work proceeds as assigned by the contractor until the dispute is resolved. See PLA Article 10, Section 3.

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NYC AGENCY RENOVATION & REHAB OF CITY OWNED BUILDINGS/STRUCTURES

PROJECT LABOR AGREEMENT
COVERING SPECIFIED
RENOVATION & REHABILITATION
OF CITY OWNED BUILDINGS AND STRUCTURES

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**PROJECT LABOR AGREEMENT COVERING SPECIFIED
RENOVATION & REHABILITATION OF NEW YORK CITY OWNED
FACILITIES & STRUCTURES**

ARTICLE 1 - PREAMBLE

WHEREAS, the City of New York desires to provide for the cost efficient, safe, quality, and timely completion of certain rehabilitation and renovation work ("Program Work," as defined in Article 3) for Fiscal Years 2010 - 2014 in a manner designed to afford the lowest costs to the Agencies covered by this Agreement, and the Public it represents, and the advancement of permissible statutory objectives;

WHEREAS, this Project Labor Agreement will foster the achievement of these goals, inter alia, by:

(1) providing a mechanism for responding to the unique construction needs associated with this Program Work and achieving the most cost effective means of construction, including direct labor cost savings, by the Building and Construction Trades Council of Greater New York and Vicinity and the signatory Local Unions and their members waiving various shift and other hourly premiums and other work and pay practices which would otherwise apply to Program Work;

(2) expediting the construction process and otherwise minimizing the disruption to the covered Agencies' ongoing operations at the facilities that are the subject of the Agreement;

(3) avoiding the costly delays of potential strikes, slowdowns, walkouts, picketing and other disruptions arising from work disputes, reducing jobsite friction on common situs worksites, and promoting labor harmony and peace for the duration of the Program Work;

(4) standardizing the terms and conditions governing the employment of labor on the Program Work;

(5) permitting wide flexibility in work scheduling and shift hours and times to allow maximum work to be done during off hours yet at affordable pay rates;

(6) permitting adjustments to work rules and staffing requirements from those which otherwise might obtain;

(7) providing comprehensive and standardized mechanisms for the settlement of work disputes, including those relating to jurisdiction;

- (8) ensuring a reliable source of skilled and experienced labor; and
- (9) securing applicable New York State Labor Law exemptions.

WHEREAS, the Building and Construction Trades Council of Greater New York and Vicinity, its participating affiliated Local Unions and their members, desire to assist the City in meeting these operational needs and objectives as well as to provide for stability, security and work opportunities which are afforded by this Project Labor Agreement; and

WHEREAS, the Parties desire to maximize Program Work safety conditions for both workers and the community in the project area.

NOW, THEREFORE, the Parties enter into this Agreement:

SECTION 1. PARTIES TO THE AGREEMENT

This is a Project Labor Agreement ("Agreement") entered into by the City of New York, on behalf of itself and the Agencies covered herein, including in their capacity as construction manager of covered projects and/or on behalf of any third party construction manager which may be utilized, and the Building and Construction Trades Council of Greater New York and Vicinity ("Council") (on behalf of itself) and the signatory affiliated Local Union's ("Unions" or "Local Unions"). The Council and each signatory Local Union hereby warrants and represents that it has been duly authorized to enter into this Agreement.

ARTICLE 2 - GENERAL CONDITIONS

SECTION 1. DEFINITIONS

Throughout this Agreement, the various Union parties including the Building and Construction Trades Council of Greater New York and Vicinity and its participating affiliated Local Unions, are referred to singularly and collectively as "Union(s)" or "Local Unions"; the term "Contractor(s)" shall include any Construction Manager, General Contractor and all other

contractors, and subcontractors of all tiers engaged in Program Work within the scope of this Agreement as defined in Article 3; "Agency" means the following New York City agencies: the Department for the Aging (DFTA), Administration for Children's Services (ACS), Department of Citywide Administrative Services (DCAS), Department of Corrections (DOC), Department of Design and Construction (DDC), Fire Department (FDNY), Department of Homeless Services (DHS), Human Resources Administration (HRA), Department of Health and Mental Hygiene (DOHMH), Department of Parks and Recreation (DPR), Police Department (NYPD); Department of Sanitation (DSNY); the New York City Agency that awards a particular contract subject to this Agreement may be referred to hereafter as the "Agency"; when an Agency acts as Construction Manager, unless otherwise provided, it has the rights and obligations of a "Construction Manager" in addition to the rights and obligations of an Agency; the Building and Construction Trades Council of Greater New York and Vicinity is referred to as the "Council"; and the work covered by this Agreement (as defined in Article 3) is referred to as "Program Work."

SECTION 2. CONDITIONS FOR AGREEMENT TO BECOME EFFECTIVE

This Agreement shall not become effective unless each of the following conditions are met: the Agreement is executed by (1) the Council, on behalf of itself, (2) the participating affiliated Local Unions; and (3) the mayor of the City of New York or his designee.

SECTION 3. ENTITIES BOUND & ADMINISTRATION OF AGREEMENT

This Agreement shall be binding on all participating Unions and their affiliates, the Construction Manager (in its capacity as such) and all Contractors of all tiers performing Program Work, as defined in Article 3. The Contractors shall include in any subcontract that they let for performance during the term of this Agreement a requirement that their subcontractors, of all tiers, become signatory and bound by this Agreement with respect to that subcontracted work

falling within the scope of Article 3 and all Contractors (including subcontractors) performing Program Work shall be required to sign a "Letter of Assent" in the form annexed hereto as Exhibit "A". This Agreement shall be administered by the applicable Agency or a Construction Manager or such other designee as may be named by the Agency or Construction Manager, on behalf of all Contractors.

SECTION 4. SUPREMACY CLAUSE

This Agreement, together with the local Collective Bargaining Agreements appended hereto as Schedule A, represents the complete understanding of all signatories and supersedes any national agreement, local agreement or other collective bargaining agreement of any type which would otherwise apply to this Program Work, in whole or in part, except that Program Work which falls within the jurisdiction of the Operating Engineers Locals 14 and 15 and/or the Teamsters Local 282 will be performed under the terms and conditions set out in the Schedule A agreements of Operating Engineers Locals 14 and 15 and Teamsters Local 282. Subject to the foregoing, where a subject covered by the provisions of this Agreement is also covered by a Schedule A, the provisions of this Agreement shall prevail. It is further understood that no Contractor shall be required to sign any other agreement as a condition of performing Program Work. No practice, understanding or agreement between a Contractor and a Local Union which is not set forth in this Agreement shall be binding on this Program Work unless endorsed in writing by the Construction Manager or such other designee as may be designated by the Agency.

SECTION 5. LIABILITY

The liability of any Contractor and the liability of any Union under this Agreement shall be several and not joint. The Construction Manager and any Contractor shall not be liable for any violations of this Agreement by any other Contractor; and the Council and

Local Unions shall not be liable for any violations of this Agreement by any other Union.

SECTION 6. THE AGENCY

The Agency (or Construction Manager where applicable) shall require in its bid specifications for all Program Work within the scope of Article 3 that all successful bidders, and their subcontractors of all tiers, become bound by, and signatory to, this Agreement. The Agency (or Construction Manager) shall not be liable for any violation of this Agreement by any Contractor. It is understood that nothing in this Agreement shall be construed as limiting the sole discretion of the Agency or Construction Manager in determining which Contractors shall be awarded contracts for Program Work. It is further understood that the Agency or Construction Manager has sole discretion at any time to terminate, delay or suspend the Program Work, in whole or part, on any Program.

SECTION 7. AVAILABILITY AND APPLICABILITY TO ALL SUCCESSFUL BIDDERS

The Unions agree that this Agreement will be made available to, and will fully apply to, any successful bidder for (or subcontractor of) Program Work who becomes signatory thereto, without regard to whether that successful bidder (or subcontractor) performs work at other sites on either a union or non-union basis and without regard to whether employees of such successful bidder (or subcontractor) are, or are not, members of any unions. This Agreement shall not apply to the work of any Contractor which is performed at any location other than the site of Program Work.

SECTION 8. SUBCONTRACTING

Contractors will subcontract Program Work only to a person, firm or corporation who is or agrees to become party to this Agreement.

ARTICLE 3-SCOPE OF THE AGREEMENT

SECTION 1. WORK COVERED

Program Work shall be limited to designated rehabilitation and renovation construction contracts bid and let by an Agency (or its Construction Manager where applicable) after the effective date of this Agreement with respect to rehabilitation and renovation work performed for an Agency on City-owned property under contracts let prior to June 30, 2014. Subject to the foregoing, and the exclusions below, such Program Work shall mean any and all contracts that predominantly involve the renovation, repair, alteration, rehabilitation or expansion of an existing City-owned building or structure within the five boroughs of New York City. Examples of Program Work include, but are not limited to, the renovation, repair, alteration and rehabilitation of an existing temporary or permanent structure, or an expansion of above ground structures located in the City on a City-owned building. This Program Work shall also include JOCS contracts, demolition work, site work, asbestos and lead abatement, painting services, carpentry services, and carpet removal and installation, to the extent incidental to such building rehabilitation of City-owned buildings or structures.

It is understood that Program Work does not include, and this Project Labor Agreement shall not apply to, any other work, including:

1. Contracts let and work performed in connection with projects carried over, recycled from, or performed under bids or rebids relating to work that were bid prior to the effective date of this Agreement or after June 30, 2014;
2. Contracts procured on an emergency basis;
3. Small purchases (purchases not more than \$100,000) awarded pursuant to New York City Charter §314, New York City Charter § 316 and New York City Procurement Policy Board Rules §3-08;
4. Contracts for work on streets and bridges and for the closing or environmental remediation of landfills;

5. Contracts with not-for-profit corporations where the City is not awarding or performing the work performed for that entity;

6. Contracts with governmental entities where the City is not awarding or performing the work performed for that entity;

7. Contracts with electric utilities, gas utilities, telephone companies, and railroads, except that it is understood and agreed that these entities may only install their work to a demarcation point, e.g. a telephone closet or utility vault, the location of which is determined prior to construction and employees of such entities shall not be used to replace employees performing Program Work pursuant to this agreement; and

8. Contracts for installation of information technology that are not otherwise Program Work.

SECTION 2. TIME LIMITATIONS

In addition to falling within the scope of Article 3, Section 1, to be covered by this Agreement Program Work must be (1) advertised and let for bid after the effective date of this Agreement, and (2) let for bid prior to June 30, 2014, the expiration date of this Agreement. It is understood that this Agreement, together with all of its provisions, shall remain in effect for all such Program Work until completion, even if not completed by the expiration date of the Agreement. If Program Work otherwise falling within the scope of Article 3, Section 1 is not let for bid by the expiration date of this Agreement, this Agreement may be extended to that work by mutual agreement of the parties.

SECTION 3. EXCLUDED EMPLOYEES

The following persons are not subject to the provisions of this Agreement, even though performing Program Work:

A. Superintendents, supervisors (excluding general and forepersons

specifically covered by a craft's Schedule A), engineers, professional engineers and/or licensed architects engaged in inspection and testing, quality control/assurance personnel, timekeepers, mail carriers, clerks, office workers, messengers, guards, technicians, non-manual employees, and all professional, engineering, administrative and management persons;

B. Employees of the Agency, New York City, or any other municipal or State agency, authority or entity, or employees of any other public employer, even though working on the Program site while covered Program Work is underway;

C. Employees and entities engaged in off-site manufacture, modifications, repair, maintenance, assembly, painting, handling or fabrication of project components, materials, equipment or machinery or involved in deliveries to and from the Program site, except to the extent they are lawfully included in the bargaining unit of a Schedule A agreement;

D. Employees of the Construction Manager (except that in the event the Agency engages a Contractor to serve as Construction Manager, then those employees of the Construction Manager performing manual, on site construction labor will be covered by this Agreement);

E. Employees engaged in on-site equipment warranty work unless employees are already working on the site and are certified to perform warranty work;

F. Employees engaged in geophysical testing other than boring for core samples;

G. Employees engaged in laboratory, specialty testing, or inspections, pursuant to a professional services agreement between the Agency, or any of the Agency's other professional consultants, and such laboratory, testing, inspection or surveying firm; and

H. Employees engaged in on-site maintenance of installed equipment or systems which maintenance is awarded as part of a contract that includes Program Work but

which maintenance occurs after installation of such equipment or system and is not directly related to construction services.

SECTION 4. NON-APPLICATION TO CERTAIN ENTITIES

This Agreement shall not apply to those parents, affiliates, subsidiaries, or other joint or sole ventures of any Contractor which do not perform Program Work. It is agreed that this Agreement does not have the effect of creating any joint employment, single employer or alter ego status among the Agency (including in its capacity as Construction Manager) or any Contractor. The Agreement shall further not apply to any New York City or other municipal or State agency, authority, or entity other than a listed Agency and nothing contained herein shall be construed to prohibit or restrict the Agency or its employees, or any State, New York City or other municipal or State authority, agency or entity and its employees, from performing on or off-site work related to Program Work.

As the contracts involving Program Work are completed and accepted, the Agreement shall not have further force or effect on such items or areas except where inspections, additions, repairs, modifications, check-out and/or warranty work are assigned in writing (copy to Local Union involved) by the Agency (or Construction Manager) for performance under the terms of this Agreement.

ARTICLE 4- UNION RECOGNITION AND EMPLOYMENT

SECTION 1. PRE-HIRE RECOGNITION

The Contractors recognize the signatory Unions as the sole and exclusive bargaining representatives of all employees who are performing on-site Program Work, with respect to that work.

SECTION 2. UNION REFERRAL

A. The Contractors agree to employ and hire craft employees for Program Work covered by this Agreement through the job referral systems and hiring halls established in the Local Unions' area collective bargaining agreements. Notwithstanding this, Contractors shall have sole right to determine the competency of all referrals; to determine the number of employees required; to select employees for layoff (subject to Article 5, Section 3); and the sole right to reject any applicant referred by a Local Union, subject to the show-up payments. In the event that a Local Union is unable to fill any request for qualified employees within a 48 hour period after such requisition is made by a Contractor (Saturdays, Sundays and holidays excepted), a Contractor may employ qualified applicants from any other available source. In the event that the Local Union does not have a job referral system, the Contractor shall give the Local Union first preference to refer applicants, subject to the other provisions of this Article. The Contractor shall notify the Local Union of craft employees hired for Program Work within its jurisdiction from any source other than referral by the Union.

B. A Contractor may request by name, and the Local will honor, referral of persons who have applied to the Local for Program Work and who meet the following qualifications:

- (1) possess any license required by New York State law for the Program Work to be performed;
- (2) have worked a total of at least 1000 hours in the Construction field during the prior 3 years; and
- (3) were on the Contractor's active payroll for at least 60 out of the 180 calendar days prior to the contract award.

No more than twelve per centum (12%) of the employees covered by this Agreement, per Contractor by craft, shall be hired through the special provisions above. Under this provision, name referrals begin with the eighth employee needed and continue on that same

basis.

C. Notwithstanding Section 2(B), above, certified MWBE contractors for which participation goals are set pursuant to New York City Administrative Code §6-129, that are not signatory to any Schedule A CBAs, with contracts valued at or under five hundred thousand (\$500,000), may request by name, and the Local will honor, referral of the second (2nd), fourth (4th), sixth (6th), and eighth (8th) employee, who have applied to the Local for Program Work and who meet the following qualifications:

- (1) possess any license required by New York State law for the Program Work to be performed;
- (2) have worked a total of at least 1000 hours in the Construction field during the prior 3 years; and
- (3) were on the Contractor's active payroll for at least 60 out of the 180 work days prior to the contract award.

For such contracts valued at above \$500,000 but less than \$1 million, the Local will honor referrals by name of the second (2nd), fifth (5th), and eighth (8th) employee subject to the foregoing requirements. In both cases, name referrals will thereafter be in accordance with Section 2(B), above.

D. Where a certified MWBE Contractor voluntarily enters into a Collective Bargaining Agreement ("CBA") with a BCTC Union, the employees of such Contractor at the time the CBA is executed shall be allowed to join the Union for the applicable trade subject to satisfying the Union's basic standards of proficiency for admission.

SECTION 3. NON-DISCRIMINATION IN REFERRALS

The Council represents that each Local Union hiring hall and referral system will be operated in a non-discriminatory manner and in full compliance with all applicable federal, state and local laws and regulations which require equal employment opportunities. Referrals

shall not be affected in any way by the rules, regulations, bylaws, constitutional provisions or any other aspects or obligations of union membership, policies or requirements and shall be subject to such other conditions as are established in this Article. No employment applicant shall be discriminated against by any referral system or hiring hall because of the applicant's union membership, or lack thereof.

SECTION 4: MINORITY AND FEMALE REFERRALS

In the event a Local Union either fails, or is unable to refer qualified minority or female applicants in percentages equaling the workforce participation goals adopted by the City and set forth in the Agency's (or, if applicable, Construction Manager's) bid specifications, within 48 hours of the request for same, the Contractor may employ qualified minority or female applicants from any other available source.

SECTION 5. CROSS AND QUALIFIED REFERRALS

The Local Unions shall not knowingly refer to a Contractor an employee then employed by another Contractor working under this Agreement. The Local Unions will exert their utmost efforts to recruit sufficient numbers of skilled and qualified crafts employees to fulfill the requirements of the Contractor.

SECTION 6. UNION DUES

All employees covered by this Agreement shall be subject to the union security provisions contained in the applicable Schedule A local agreements, as amended from time to time, but only for the period of time during which they are performing on-site Program Work and only to the extent of tendering payment of the applicable union dues and assessments uniformly required for union membership in the Local Unions which represent the craft in which the employee is performing Program Work. No employee shall be discriminated against at any Program Work site because of the employee's union membership or lack thereof. In the case of

unaffiliated employees, the dues payment will be received by the Local Unions as an agency shop fee.

SECTION 7. CRAFT FOREPERSONS AND GENERAL FOREPERSONS

The selection of craft forepersons and/or general forepersons and the number of forepersons required shall be solely the responsibility of the Contractor except where otherwise provided by specific provisions of an applicable Schedule A, and provided that all craft forepersons shall be experienced and qualified journeypersons in their trade as determined by the appropriate Local Union. All forepersons shall take orders exclusively from the designated Contractor representatives. Craft forepersons shall be designated as working forepersons at the request of the Contractor, except when an existing local Collective Bargaining Agreement prohibits a foreperson from working when the craft persons he is leading exceed a specified number.

ARTICLE 5- UNION REPRESENTATION

SECTION 1. LOCAL UNION REPRESENTATIVE

Each Local Union representing on-site employees shall be entitled to designate in writing (copy to Contractor involved and Construction Manager) one representative, and/or the Business Manager, who shall be afforded access to the Program Work site.

SECTION 2. STEWARDS

A. Each Local Union shall have the right to designate a working journey person as a Steward and an alternate, and shall notify the Contractor and Construction Manager of the identity of the designated Steward (and alternate) prior to the assumption of such duties. Stewards shall not exercise supervisory functions and will receive the regular rate of pay for their craft classifications. All Stewards shall be working Stewards.

B. In addition to their work as an employee, the Steward shall have the right

to receive complaints or grievances and to discuss and assist in their adjustment with the Contractor's appropriate supervisor. Each Steward shall be concerned with the employees of the Steward's trade and, if applicable, subcontractors of their Contractor, but not with the employees of any other trade Contractor. No Contractor shall discriminate against the Steward in the proper performance of Union duties.

C. The Stewards shall not have the right to determine when overtime shall be worked, or who shall work overtime except pursuant to a Schedule A provision providing procedures for the equitable distribution of overtime.

SECTION 3. LAYOFF OF A STEWARD

Contractors agree to notify the appropriate Union 24 hours prior to the layoff of a Steward, except in cases of discipline or discharge for just cause. If a Steward is protected against layoff by a Schedule A provision, such provision shall be recognized to the extent the Steward possesses the necessary qualifications to perform the work required. In any case in which a Steward is discharged or disciplined for just cause, the Local Union involved shall be notified immediately by the Contractor.

ARTICLE 6- MANAGEMENT'S RIGHTS

SECTION 1. RESERVATION OF RIGHTS

Except as expressly limited by a specific provision of this Agreement, Contractors retain full and exclusive authority for the management of their operations including, but not limited to, the right to: direct the work force, including determination as to the number of employees to be hired and the qualifications therefore; the promotion, transfer, layoff of its employees; require compliance with the directives of the Agency including standard restrictions related to security and access to the site that are equally applicable to Agency employees, guests,

or vendors; or the discipline or discharge for just cause of its employees; assign and schedule work; promulgate reasonable Program Work rules that are not inconsistent with this Agreement or rules common in the industry and are reasonably related to the nature of work; and, the requirement, timing and number of employees to be utilized for overtime work. No rules, customs, or practices which limit or restrict productivity or efficiency of the individual, as determined by the Contractor, Agency and/or Construction Manager and/or joint working efforts with other employees shall be permitted or observed.

SECTION 2. MATERIALS, METHODS & EQUIPMENT

There shall be no limitation or restriction upon the Contractors' choice of materials, techniques, methods, technology or design, or, regardless of source or location, upon the use and installation of equipment, machinery, package units, pre-cast, pre-fabricated, pre-finished, or pre-assembled materials or products, tools, or other labor-saving devices. Contractors may, without restriction, install or use materials, supplies or equipment regardless of their source; provided, however, that where there is a Schedule "A" that includes a lawful union standards and practices clauses, then such clause as set forth in Schedule A Agreements will be complied with, unless there is a lawful Agency specification (or specification issued by a Construction Manager which would be lawful if issued by the Agency directly) that would specifically limit or restrict the Contractor's choice of materials, techniques, methods, technology or design, or, regardless of source or location, upon the use and installation of equipment, machinery, package units, pre-cast, pre-fabricated, pre-finished, or pre-assembled materials or products, tools, or other labor-saving devices, and which would prevent compliance with such Schedule A clause. The on-site installation or application of such items shall be performed by the craft having jurisdiction over such work; provided, however, it is recognized that other personnel having special qualifications may participate, in a supervisory capacity, in

the installation, check-off or testing of specialized or unusual equipment or facilities as designated by the Contractor. There shall be no restrictions as to work which is performed off-site for Program Work.

ARTICLE 7- WORK STOPPAGES AND LOCKOUTS

SECTION 1. NO STRIKES-NO LOCK OUT

There shall be no strikes, sympathy strikes, picketing, work stoppages, slowdowns, hand billing, demonstrations or other disruptive activity at the Program Work site for any reason by any Union or employee against any Contractor or employer. There shall be no other Union, or concerted or employee activity which disrupts or interferes with the operation of the Program Work or the objectives of the Agency at any Program Work site. In addition, failure of any Union or employee to cross any picket line established by any Union, signatory or non-signatory to this Agreement, or the picket or demonstration line of any other organization, at or in proximity to a Program Work site where the failure to cross disrupts or interferes with the operation of Program Work is a violation of this Article. Should any employees breach this provision, the Unions will use their best efforts to try to immediately end that breach and return all employees to work. There shall be no lockout at a Program Work site by any signatory Contractor, Agency or Construction Manager.

SECTION 2. DISCHARGE FOR VIOLATION

A Contractor may discharge any employee violating Section 1, above, and any such employee will not be eligible thereafter for referral under this Agreement for a period of 100 days.

SECTION 3. NOTIFICATION

If a Contractor contends that any Union has violated this Article, it will notify the

Local Union involved advising of such fact, with copies of the notification to the Council. The Local Union shall instruct and order, the Council shall request, and each shall otherwise use their best efforts to cause, the employees (and where necessary the Council shall use its best efforts to cause the Local Union), to immediately cease and desist from any violation of this Article. If the Council complies with these obligations it shall not be liable for the unauthorized acts of a Local Union or its members. Similarly, a Local Union and its members will not be liable for any unauthorized acts of the Council. Failure of a Contractor or the Construction Manager to give any notification set forth in this Article shall not excuse any violation of Section 1 of this Article.

SECTION 4. EXPEDITED ARBITRATION

Any Contractor or Union alleging a violation of Section 1 of this Article may utilize the expedited procedure set forth below (in lieu of, or in addition to, any actions at law or equity) that may be brought.

A. A party invoking this procedure shall notify J.J. Pierson or Richard Adelman; who shall alternate (beginning with Arbitrator J.J. Pierson) as Arbitrator under this expedited arbitration procedure. If the Arbitrator next on the list is not available to hear the matter within 24 hours of notice, the next Arbitrator on the list shall be called. Copies of such notification will be simultaneously sent to the alleged violator and Council.

B. The Arbitrator shall thereupon, after notice as to time and place to the Contractor, the Local Union involved, the Council and the Construction Manager, hold a hearing within 48 hours of receipt of the notice invoking the procedure if it is contended that the violation still exists. The hearing will not, however, be scheduled for less than 24 hours after the notice required by Section 3, above.

C. All notices pursuant to this Article may be provided by telephone, telegraph, hand delivery, or fax, confirmed by overnight delivery, to the Arbitrator, Contractor,

Construction Manager and Local Union involved. The hearing may be held on any day including Saturdays or Sundays. The hearing shall be completed in one session, which shall not exceed 8 hours duration (no more than 4 hours being allowed to either side to present their case, and conduct their cross examination) unless otherwise agreed. A failure of any Union or Contractor to attend the hearing shall not delay the hearing of evidence by those present or the issuance of an award by the Arbitrator.

D. The sole issue at the hearing shall be whether a violation of Section 1, above, occurred. If a violation is found to have occurred, the Arbitrator shall issue a Cease and Desist Award restraining such violation and serve copies on the Contractor and Union involved. The Arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages (any damages issue is reserved solely for court proceedings, if any.) The Award shall be issued in writing within 3 hours after the close of the hearing, and may be issued without an Opinion. If any involved party desires an Opinion, one shall be issued within 15 calendar days, but its issuance shall not delay compliance with, or enforcement of, the Award.

E. The Agency and Construction Manager (or such other designee of the Agency) may participate in full in all proceedings under this Article.

F. An Award issued under this procedure may be enforced by any court of competent jurisdiction upon the filing of this Agreement together with the Award. Notice of the filing of such enforcement proceedings shall be given to the Union or Contractor involved, and the Construction Manager.

G. Any rights created by statute or law governing arbitration proceedings which are inconsistent with the procedure set forth in this Article, or which interfere with compliance thereto, are hereby waived by the Contractors and Unions to whom they accrue.

H. The fees and expenses of the Arbitrator shall be equally divided between the involved Contractor and Union.

SECTION 5. ARBITRATION OF DISCHARGES FOR VIOLATION

Procedures contained in Article 9 shall not be applicable to any alleged violation of this Article, with the single exception that an employee discharged for violation of Section 1, above, may have recourse to the procedures of Article 9 to determine only if the employee did, in fact, violate the provisions of Section 1 of this Article; but not for the purpose of modifying the discipline imposed where a violation is found to have occurred.

ARTICLE 8 - LABOR MANAGEMENT COMMITTEE

SECTION 1. SUBJECTS

The Program Labor Management Committee will meet on a regular basis to: 1) promote harmonious relations among the Contractors and Unions; 2) enhance safety awareness, cost effectiveness and productivity of construction operations; 3) protect the public interests; 4) discuss matters relating to staffing and scheduling with safety and productivity as considerations; and 5) review efforts to meet applicable participation goals for MWBEs and workforce participation goals for minority and female employees.

SECTION 2. COMPOSITION

The Committee shall be jointly chaired by a designee of the Agency and the President of the Council. It may include representatives of the Local Unions and Contractors involved in the issues being discussed. The parties may mutually designate an MWBE representative to participate in appropriate Committee discussions. The Committee may conduct business through mutually agreed upon sub-committees.

ARTICLE 9- GRIEVANCE & ARBITRATION PROCEDURE

SECTION 1. PROCEDURE FOR RESOLUTION OF GRIEVANCES

Any question, dispute or claim arising out of, or involving the interpretation or application of this Agreement (other than jurisdictional disputes or alleged violations of Article 7, Section 1) shall be considered a grievance and shall be resolved pursuant to the exclusive procedure of the steps described below, provided, in all cases, that the question, dispute or claim arose during the term of this Agreement.

Step 1:

(a) When any employee covered by this Agreement feels aggrieved by a claimed violation of this Agreement, the employee shall, through the Local Union business representative or job steward give notice of the claimed violation to the work site representative of the involved Contractor and the Construction Manager. To be timely, such notice of the grievance must be given within 7 calendar days after the act, occurrence or event giving rise to the grievance. The business representative of the Local Union or the job steward and the work site representative of the involved Contractor shall meet and endeavor to adjust the matter within 7 calendar days after timely notice has been given. If they fail to resolve the matter within the prescribed period, the grieving party, may, within 7 calendar days thereafter, pursue Step 2 of the grievance procedure by serving the involved Contractor with written copies of the grievance setting forth a description of the claimed violation, the date on which the grievance occurred, and the provisions of the Agreement alleged to have been violated. Grievances and disputes settled at Step 1 are non-precedential except as to the specific Local Union, employee and Contractor directly involved unless the settlement is accepted in writing by the Construction Manager (or designee) as creating a precedent.

(b) Should any signatory to this Agreement have a dispute (excepting jurisdictional disputes or alleged violations of Article 7, Section 1) with any other signatory to

this Agreement and, if after conferring, a settlement is not reached within 7 calendar days, the dispute shall be reduced to writing and proceed to Step 2 in the same manner as outlined in subparagraph (a) for the adjustment of employee grievances.

Step 2:

The Business Manager or designee of the involved Local Union, together with representatives of the involved Contractor, Council and the Construction Manager (or designee), shall meet in Step 2 within 7 calendar days of service of the written grievance to arrive at a satisfactory settlement.

Step 3:

(a) If the grievance shall have been submitted but not resolved in Step 2, any of the participating Step 2 entities may, within 21 calendar days after the initial Step 2 meeting, submit the grievance in writing (copies to other participants, including the Construction Manager or designee) to J.J. Pierson or Richard Adelman, who shall act, alternately (beginning with Arbitrator J.J. Pierson), as the Arbitrator under this procedure. The Labor Arbitration Rules of the American Arbitration Association shall govern the conduct of the arbitration hearing, at which all Step 2 participants shall be parties. The decision of the Arbitrator shall be final and binding on the involved Contractor, Local Union and employees and the fees and expenses of such arbitrations shall be borne equally by the involved Contractor and Local Union.

(b) Failure of the grieving party to adhere to the time limits set forth in this Article shall render the grievance null and void. These time limits may be extended only by written consent of the Construction Manager (or designee), involved Contractor and involved Local Union at the particular step where the extension is agreed upon. The Arbitrator shall have authority to make decisions only on the issues presented to him and shall not have the authority to change, add to, delete or modify any provision of this Agreement.

SECTION 2. LIMITATION AS TO RETROACTIVITY

No arbitration decision or award may provide retroactivity of any kind exceeding 60 calendar days prior to the date of service of the written grievance on the Construction Manager and the involved Contractor or Local Union.

SECTION 3. PARTICIPATION BY AGENCY AND/OR CONSTRUCTION MANAGER

The Agency and Construction Manager (or such other designee of the Agency) shall be notified by the involved Contractor of all actions at Steps 2 and 3 and, at its election, may participate in full in all proceedings at these Steps, including Step 3 arbitration.

ARTICLE 10 - JURISDICTIONAL DISPUTES

SECTION 1. NO DISRUPTIONS

There will be no strikes, sympathy strikes, work stoppages, slowdowns, picketing or other disruptive activity of any kind arising out of any jurisdictional dispute. Pending the resolution of the dispute, the work shall continue uninterrupted and as assigned by the Contractor. No jurisdictional dispute shall excuse a violation of Article 7.

SECTION 2. ASSIGNMENT

All Program Work assignments shall be made by the Contractor to unions affiliated with the BCTC consistent with the New York Plan for the Settlement of Jurisdictional Disputes ("New York Plan") and its Greenbook decisions, if any. Where there are no applicable Greenbook decisions, assignments shall be made in accordance with the provisions of the New York Plan and local industry practice.

SECTION 3. NO INTERFERENCE WITH WORK

There shall be no interference or interruption of any kind with the Program Work while any jurisdictional dispute is being resolved. The work shall proceed as assigned by the

Contractor until finally resolved under the applicable procedure of this Article. The award shall be confirmed in writing to the involved parties. There shall be no strike, work stoppage or interruption in protest of any such award.

ARTICLE 11 - WAGES AND BENEFITS

SECTION 1. CLASSIFICATION AND BASE HOURLY RATE

All employees covered by this Agreement shall be classified in accordance with the work performed and paid the hourly wage rates applicable for those classifications as required by the applicable prevailing wage laws.

SECTION 2. EMPLOYEE BENEFITS

A. The Contractors agree to pay on a timely basis contributions on behalf of all employees covered by this Agreement to those established jointly trustee employee benefit funds designated in Schedule A (in the appropriate Schedule A amounts), provided that such benefits are required to be paid on public works under any applicable prevailing wage law. Bona fide jointly trustee fringe benefit plans established or negotiated through collective bargaining during the life of this Agreement may be added if similarly required under applicable prevailing wage law. Contractors, not otherwise contractually bound to do so, shall not be required to contribute to benefits, trusts or plans of any kind which are not required by the prevailing wage law provided, however, that this provision does not relieve Contractors signatory to local collective bargaining agreement with any affiliated union from complying with the fringe benefit requirements for all funds contained in the CBA.

B. The Contractors agree to be bound by the written terms of the legally established jointly trustee Trust Agreements specifying the detailed basis on which payments are to be paid into, and benefits paid out of, such Trust Funds but only with regard to Program Work done under this Agreement and only for those employees to whom this Agreement

requires such benefit payments.

C. To the extent consistent with New York City's Procurement Policy Board Rules with respect to prompt payment, as published at www.nyc.gov/ppb, §4-06(e), and in consideration of the unions' waiver of their rights to withhold labor from a contractor or subcontractor delinquent in the payment of fringe benefits contributions ("Delinquent Contractor"); the Agency agrees that where any such union and/or fringe benefit fund shall notify the Agency, the General Contractor, and the Delinquent Contractor in writing with back-up documentation that the Delinquent Contractor has failed to make fringe benefit contributions to it as provided herein and the Delinquent Contractor shall fail, within ten (10) calendar days after receipt of such notice, to furnish either proof of such payment or notice that the amount claimed by the union and/or fringe benefit fund is in dispute, the Agency shall withhold from amounts then or thereafter becoming due and payable to the General Contractor an amount equal to that portion of such payment due to the General Contractor that relates solely to the work performed by the Delinquent Contractor which the union or fringe benefit fund claims to be due it, and shall remit the amount when and so withheld to the fringe benefit fund and deduct such payment from the amounts then otherwise due and payable to the General Contractor, which payment shall, as between the General Contractor and the Agency, be deemed a payment by the Agency to the General Contractor; provided however, that in any month, such withholding shall not exceed the amount contained in the General Contractor's monthly invoice for work performed by the Delinquent Contractor. The union or its employee benefit funds shall include in its notification of delinquent payment of fringe benefits only such amount it asserts the Delinquent Contractor failed to pay on the specific project against which the claim is made and the union or its employee benefit funds may not include in such notification any amount such Delinquent Contractor may have failed to pay on any other City or non-City project.

D. In the event the General Contractor or Delinquent Contractor shall notify the Agency as above provided that the claim of the union or fringe benefit fund is in dispute, the Agency shall withhold from amounts then or thereafter becoming due and payable to the General Contractor an amount equal to that portion of such payment due to the General Contractor that relates solely to the work performed by the Delinquent Contractor which the union and/or fringe benefit fund claims to be due it, and deposit such amount when and so withheld in a separate interest-bearing account pending resolution of the dispute pursuant to the union's Schedule A agreement, and the amount so deposited together with the interest thereon shall be paid to the party or parties ultimately determined to be entitled thereto, or held until the Delinquent Contractor and union or fringe benefit fund shall otherwise agree as to the disposition thereof; provided however, that such withholding shall not exceed the amount contained in the General Contractor's monthly invoice for work performed by the Delinquent Contractor. In the event the Agency shall be required to withhold amounts from a General Contractor for the benefit of more than one fringe benefit fund, the amounts so withheld in the manner and amount prescribed above shall be applied to or for such fund in the order in which the written notices of nonpayment have been received by the Agency, and if more than one such notice was received on the same day, proportionately based upon the amount of the union and/or fringe benefit fund claims received on such day. Nothing herein contained shall prevent the Agency from commencing an interpleader action to determine entitlement to a disputed payment in accordance with section one thousand six of the civil practice law and rules or any successor provision thereto.

E. Payment to a fringe benefit fund under this provision shall not relieve the General Contractor or Delinquent Contractor from responsibility for the work covered by the payment. Except as otherwise provided, nothing contained herein shall create any obligation on

the part of the Agency to pay any union or fringe benefit fund, nor shall anything provided herein serve to create any relationship in contract or otherwise, implied or expressed, between the union/fund and/or fringe benefit and the Agency.

**ARTICLE 12- HOURS OF WORK, PREMIUM PAYMENTS,
SHIFTS AND HOLIDAYS**

SECTION 1. WORK WEEK AND WORK DAY

A. The standard work week shall consist of 40 hours of work at straight time rates, Monday through Friday, 8 hours per day, plus ½ hour unpaid lunch period.

B. In accordance with Program needs, there shall be flexible start times with advance notice from Contractor to the Union. The Day Shift shall commence between the hours of 6:00 a.m. and 9:00 a.m. and shall end between the hours of 2:30 p.m. and 5:30 p.m., for an 8 hour day, and up to 7:30 p.m. for a 10 hour day. The Evening Shift shall commence between the hours of 3:00 p.m. and 6:00 p.m., unless different times are necessitated by the Agency's phasing plans on specific projects. The Night Shift shall commence between the hours of 11:00 p.m. and 2:00 a.m., unless different times are necessitated by the Agency's phasing plans on specific projects. Subject to the foregoing, starting and quitting times shall occur at the Program Work site designated by the Contractor.

C. Scheduling - Monday through Friday is the standard work week; 8 hours of work plus ½ hour unpaid lunch. Notwithstanding any other provision of this Agreement, a contractor may schedule a four day work week, 10 hours per day at straight time rates, plus a ½ hour unpaid lunch, at the commencement of the job.

D. Notice - Contractors shall provide not less than 5 days prior notice to the Local Union involved as to the work week and work hour schedules to be worked or such lesser notice as may be mutually agreed upon.

SECTION 2. OVERTIME

Overtime shall be paid for any work over eight (8) hours in a day where 5/8s is scheduled or for work over ten (10) hours in a day where 4/10s is scheduled and over forty (40) hours in a week, at time and one half (1½) Monday through Saturday. All overtime work performed on Sunday and Holidays will be paid pursuant to the applicable Schedule A. There shall be no stacking or pyramiding of overtime pay under any circumstances. There will be no restriction upon the Contractor's scheduling of overtime or the nondiscriminatory designation of employees who shall be worked, including the use of employees, other than those who have worked the regular or scheduled work week, at straight time rates. The Contractor shall have the right to schedule work so as to minimize overtime or schedule overtime as to some, but not all, of the crafts and whether or not of a continuous nature.

SECTION 3. SHIFTS

A. Flexible Schedules - Scheduling of shift work, including Saturday and Sunday work, shall be within the discretion of the Contractor in order to meet Program Work schedules and existing Program Work conditions including the minimization of interference with the mission of the Agency. It is not necessary to work a day shift in order to schedule a second or third shift, or a second shift in order to schedule a third shift, or to schedule all of the crafts when only certain crafts or employees are needed. Shifts must have prior approval of the Agency or Construction Manager, and must be scheduled with not less than five work days notice to the Local Union or such lesser notice as may be mutually agreed upon.

B. Second and/or Third Shifts/Saturday and/or Sunday Work - - The second shift shall start between 3 p.m. and 6 p.m. and the third shift shall start between 11 p.m. and 2 a.m., subject to different times necessitated by the Agency phasing plans on specific projects. There shall be no reduction in shift hour work. With respect to second and third shift work there

shall be a 5% shift premium. No other premium or other payments for such work shall be required unless such work is in excess of 40 hours in the week. All employees within a classification performing Program Work will be paid at the same wage rate regardless of the shift or work scheduled work, subject only to the foregoing provisions.

C. Flexible Starting Times - Shift starting times will be adjusted by the Contractor as necessary to fulfill Program Work requirements subject to the notice requirements of paragraph A.

SECTION 4. HOLIDAYS

A. Schedule - There shall be 8 recognized holidays on the Project:

New Years Day	Labor Day
Martin Luther King Day	President's Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

All said holidays shall be observed on the calendar date except those holidays which occur on Saturday shall be observed on the previous Friday and those that occur on Sunday shall be observed on the following Monday.

B. Payment - Regular holiday pay, if any, for work performed on such a recognized holiday shall be in accordance with the applicable Schedule A.

C. Exclusivity - No holidays other than those listed in Section 4(A) above shall be recognized or observed.

SECTION 5. SATURDAY MAKE-UP DAYS

When severe weather, power failure, fire or natural disaster or other similar circumstances beyond the control of the Contractor prevent work from being performed on a regularly scheduled weekday, the Contractor may schedule a Saturday make-up day and such

time shall be scheduled and paid as if performed on a weekday. Any other Saturday work shall be paid at time and one-half (1½) . The Contractor shall notify the Local Union on the missed day or as soon thereafter as practicable if such a make-up day is to be worked.

SECTION 6. REPORTING PAY

A. Employees who report to the work location pursuant to their regular schedule and who are not provided with work shall be paid two hours reporting pay at straight time rates. An employee whose work is terminated early by a Contractor due to severe weather, power failure, fire or natural disaster or for similar circumstances beyond the Contractor's control, shall receive pay only for such time as is actually worked. In other instances in which an employee's work is terminated early (unless provided otherwise elsewhere in this Agreement), the employee shall be paid for his full shift.

B. When an employee, who has completed their scheduled shift and left the Program Work site, is "called out" to perform special work of a casual, incidental or irregular nature, the employee shall receive overtime pay at the rate of time and one-half of the employee's straight time rate for hours actually worked.

C. When an employee leaves the job or work location of their own volition or is discharged for cause or is not working as a result of the Contractor's invocation of Section 7 below, they shall be paid only for the actual time worked.

D. Except as specifically set forth in this Article there shall be no premiums, bonuses, hazardous duty, high time or other special premium payments or reduction in shift hours of any kind.

E. There shall be no pay for time not actually worked except as specifically set forth in this Article and except where an applicable Schedule A requires a full weeks' pay for forepersons.

SECTION 7. PAYMENT OF WAGES

A. Termination- Employees who are laid off or discharged for cause shall be paid in full for that which is due them at the time of termination. The Contractor shall also provide the employee with a written statement setting forth the date of lay off or discharge.

SECTION 8. EMERGENCY WORK SUSPENSION

A Contractor may, if considered necessary for the protection of life and/or safety of employees or others, suspend all or a portion of Program Work. In such instances, employees will be paid for actual time worked, except that when a Contractor requests that employees remain at the job site available for work, employees will be paid for that time at their hourly rate of pay.

SECTION 9. INJURY/DISABILITY

An employee who, after commencing work, suffers a work-related injury or disability while performing work duties, shall receive no less than 8 hours wages for that day. Further, the employee shall be rehired at such time as able to return to duties provided there is still Program Work available for which the employee is qualified and able to perform.

SECTION 10. TIME KEEPING

A Contractor may utilize brassing or other systems to check employees in and out. Each employee must check in and out. The Contractor will provide adequate facilities for checking in and out in an expeditious manner.

SECTION 11. MEAL PERIOD

A Contractor shall schedule an unpaid period of not more than 1/2 hour duration at the work location between the 3rd and 5th hour of the scheduled shift. A Contractor may, for efficiency of operation, establish a schedule which coordinates the meal periods of two or more crafts or which provides for staggered lunch periods within a craft or trade. If an employee is

required to work through the meal period, the employee shall be compensated in a manner established in the applicable Schedule A.

SECTION 12. BREAK PERIODS

There will be no rest periods, organized coffee breaks or other non-working time established during working hours. Individual coffee containers will be permitted at the employee's work location. Where 4/10s are being worked there shall be a morning and an afternoon coffee break.

ARTICLE 13 - APPRENTICES

SECTION 1. RATIOS

Recognizing the need to maintain continuing supportive programs designed to develop adequate numbers of competent workers in the construction industry and to provide craft entry opportunities for minorities, women and economically disadvantaged non-minority males, Contractors will employ apprentices in their respective crafts to perform such work as is within their capabilities and which is customarily performed by the craft in which they are indentured. Contractors may utilize apprentices and such other appropriate classifications in the maximum ratio permitted by the New York State Department of Labor or the maximum allowed per trade. Apprentices and such other classifications as are appropriate shall be employed in a manner consistent with the provisions of the appropriate Schedule A. The parties encourage, as an appropriate source of apprentice recruitment consistent with the rules and operations of the affiliated unions' apprentice-programs, the use of the Edward J. Malloy Initiative for Construction Skills, Non-Traditional Employment for Women and Helmets to Hardhats.

ARTICLE 14-SAFETY PROTECTION OF PERSON AND PROPERTY

SECTION 1. SAFETY REQUIREMENTS

Each Contractor will ensure that applicable OSHA and safety requirements are at all times maintained on the Program Work site and the employees and Unions agree to cooperate fully with these efforts to the extent consistent with their rights and obligations under the law. Employees will cooperate with employer safety policies and will perform their work at all times in a safe manner and protect themselves and the property of the Contractor and Agency from injury or harm, to the extent consistent with their rights and obligations under the law. Failure to do so will be grounds for discipline, including discharge.

SECTION 2. CONTRACTOR RULES

Employees covered by this Agreement shall at all times be bound by the reasonable safety, security, and visitor rules as established by the Contractors and the Construction Manager for this Program Work. Such rules will be published and posted in conspicuous places throughout the Program Work sites. Any site security and access policies established by the Construction Manager or General Contractor intended for specific application to the construction workforce for Program Work and that are not established pursuant to an Agency directive shall be implemented only after notice to the BCTC and its affiliates and an opportunity for negotiation and resolution by the Labor Management Committee.

SECTION 3. INSPECTIONS

The Contractors and Construction Manager retain the right to inspect incoming shipments of equipment, apparatus, machinery and construction materials of every kind.

ARTICLE 15 - TEMPORARY SERVICES

Temporary services, i.e. all temporary heat, water, power and light, shall only be required upon the specific request of the Agency or Construction Manager, and when so requested shall be assigned to the appropriate trade claiming jurisdiction. Temporary system coverage shall be provided by the appropriate Contractors' existing employees during working hours in which a

shift is scheduled for employees of this Contractor. The Agency or Construction Manager may determine the need for temporary system coverage requirements during non-working hours. There shall be no stacking of trades on temporary services. In the event a temporary system is claimed by multiple trades, the matter shall be resolved through the New York Plan for Jurisdictional Disputes.

ARTICLE 16 - NO DISCRIMINATION

SECTION 1. COOPERATIVE EFFORTS

The Contractors and Unions agree that they will not discriminate against any employee or applicant for employment because of creed, race, color, religion, sex, sexual orientation, national origin, marital status, citizenship status, disability, age or any other status provided by law, in any manner prohibited by law or regulation.

SECTION 2. LANGUAGE OF AGREEMENT

The use of the masculine or feminine gender in this Agreement shall be construed as including both genders.

ARTICLE 17- GENERAL TERMS

SECTION 1. PROJECT RULES

A. The Construction Manager and the Contractors shall establish such reasonable Program Work rules that are not inconsistent with this Agreement or rules common in the industry and are reasonably related to the nature of work. These rules will be explained at the pre-job conference and posted at the Program Work sites and may be amended thereafter as necessary. Notice of amendments will be provided to the appropriate Local Union. Failure of an employee to observe these rules and regulations shall be grounds for discipline, including discharge. The fact that no order was posted prohibiting a certain type of misconduct shall not be a defense to an employee disciplined or discharged for such misconduct when the action taken is

for cause.

B. The parties adopt and incorporate the BCTC's Standards of Excellence as annexed hereto as Exhibit "B".

SECTION 2. TOOLS OF THE TRADE

The welding/cutting torch and chain fall are tools of the trade having jurisdiction over the work performed. Employees using these tools shall perform any of the work of the trade. There shall be no restrictions on the emergency use of any tools or equipment by any qualified employee or on the use of any tools or equipment for the performance of work within the employee's jurisdiction.

SECTION 3. SUPERVISION

Employees shall work under the supervision of the craft foreperson or general foreperson.

SECTION 4. TRAVEL ALLOWANCES

There shall be no payments for travel expenses, travel time, subsistence allowance or other such reimbursements or special pay except as expressly set forth in this Agreement.

SECTION 5. FULL WORK DAY

Employees shall be at their work area at the starting time established by the Contractor, provided they are provided access to the work area. The signatories reaffirm their policy of a fair day's work for a fair day's wage.

SECTION 6. COOPERATION AND WAIVER

The Construction Manager, Contractors and the Unions will cooperate in seeking any NYS Department of Labor, or any other government, approvals that may be needed for implementation of any terms of this Agreement. In addition, the Council, on their own behalf and

on behalf of its participating affiliated Local Unions and their individual members, intend the provisions of this Agreement to control to the greatest extent permitted by law, notwithstanding contrary provisions of any applicable prevailing wage, or other, law and intend this Agreement to constitute a waiver of any such prevailing wage, or other, law to the greatest extent permissible only for work within the scope of this Agreement, including specifically, but not limited to those provisions relating to shift, night, and similar differentials and premiums. This Agreement does not, however, constitute a waiver or modification of the prevailing wage schedules applicable to work not covered by this Agreement.

ARTICLE 18. SAVINGS AND SEPARABILITY

SECTION 1. THIS AGREEMENT

In the event that the application of any provision of this Agreement is enjoined, on either an interlocutory or permanent basis, or is otherwise determined to be in violation of law, or if such application may cause the loss of Program funding or any New York State Labor Law exemption for all or any part of the Program Work, the provision or provisions involved (and/or its application to particular Program Work, as necessary) shall be rendered, temporarily or permanently, null and void, but where practicable the remainder of the Agreement shall remain in full force and effect to the extent allowed by law (and to the extent no funding or exemption is lost), unless the part or parts so found to be in violation of law or to cause such loss are wholly inseparable from the remaining portions of the Agreement and/or are material to the purposes of the Agreement. In the event a court of competent jurisdiction finds any portion of the Agreement to trigger the foregoing, the parties will immediately enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the court determination and the intent of the parties hereto for contracts to be let in the future.

SECTION 2. THE BID SPECIFICATIONS

In the event that the Agency's (or Construction Manager's) bid specifications, or other action, requiring that a successful bidder (and subcontractor) become signatory to this Agreement is enjoined, on either an interlocutory or permanent basis, or is otherwise determined to be in violation of law, or may cause the loss of Program funding or any New York State Labor Law exemption for all or any part of the Program Work, such requirement (and/or its application to particular Program Work, as necessary) shall be rendered, temporarily or permanently, null and void, but where practicable the Agreement shall remain in full force and effect to the extent allowed by law and to the extent no funding or exemption is lost). In such event, the Agreement shall remain in effect for contracts already bid and awarded or in construction only where the Agency and Contractor voluntarily accepts the Agreement. The parties will enter into negotiations as to modifications to the Agreement to reflect the court or other action taken and the intent of the parties for contracts to be let in the future.

SECTION 3. NON-LIABILITY

In the event of an occurrence referenced in Section 1 or Section 2 of this Article, neither the Agency, the Construction Manager, any Contractor, nor any Union shall be liable, directly or indirectly, for any action taken, or not taken, to comply with any court order or injunction, other determination, or in order to maintain funding or a New York State Labor Law exemption for Program Work. Bid specifications will be issued in conformance with court orders then in effect and no retroactive payments or other action will be required if the original court determination is ultimately reversed.

SECTION 4. NON-WAIVER

Nothing in this Article shall be construed as waiving the prohibitions of Article 7 as to signatory Contractors and signatory Unions.

ARTICLE 19 - FUTURE CHANGES IN SCHEDULE A AREA CONTRACTS

SECTION 1. CHANGES TO AREA CONTRACTS

A. Schedule A to this Agreement shall continue in full force and effect until the Contractor and/or Union parties to the Area Collective Bargaining Agreements which are the basis for Schedule A notify the Agency and Construction Manager in writing of the hourly rate changes agreed to in that Area Collective Bargaining which are applicable to work covered by this Agreement and their effective dates.

B. It is agreed that any provisions negotiated into Schedule A collective bargaining agreements will not apply to work under this Agreement if such provisions are less favorable to those uniformly required of contractors for construction work normally covered by those agreements; nor shall any provision be recognized or applied on Program Work if it may be construed to apply exclusively, or predominantly, to work covered by this Agreement.

C. Any disagreement between signatories to this Agreement over the incorporation into Schedule A of provisions agreed upon in the renegotiation of Area Collective Bargaining Agreements shall be resolved in accordance with the procedure set forth in Article 9 of this Agreement.

SECTION 2. LABOR DISPUTES DURING AREA CONTRACT NEGOTIATIONS

The Unions agree that there will be no strikes, work stoppages, sympathy actions, picketing, slowdowns or other disruptive activity or other violations of Article 7 affecting the Program Work by any Local Union involved in the renegotiation of Area Local Collective Bargaining Agreements nor shall there be any lock-out on such Program Work affecting a Local Union during the course of such renegotiations.

ARTICLE 20 - WORKERS' COMPENSATION ADR

SECTION 1.

An ADR program may be negotiated and participation in the ADR Program will be optional by trade.

ARTICLE 21 - HELMETS TO HARDHATS

Section 1.

The Contractors and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Contractors and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

Section 2.

The Unions and Contractors agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

NYC AGENCY RENOVATION & REHAB CITY OWNED BUILDINGS/STRUCTURES

IN WITNESS WHEREOF the parties have caused this Agreement to be executed and effective

as of the ___ day of _____, _____

FOR BUILDING AND CONSTRUCTION TRADES COUNCIL
OF GREATER NEW YORK AND VICINITY

BY: *Gary LaBarbera*
Gary LaBarbera
President

FOR NEW YORK CITY

BY: _____
Michael R. Bloomberg
Mayor

APPROVED AS TO FORM:

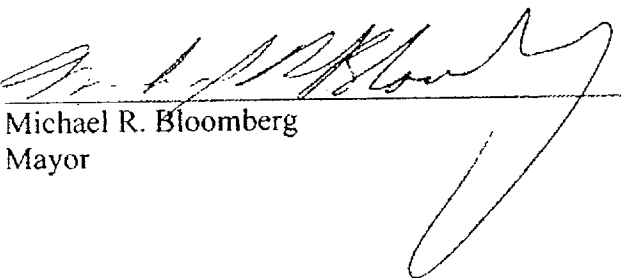
ACTING CORPORATION COUNSEL
NEW YORK CITY

IN WITNESS WHEREOF the parties have caused this Agreement to be executed and effective
as of the ___ day of _____, _____

FOR BUILDING AND CONSTRUCTION TRADES COUNCIL
OF GREATER NEW YORK AND VICINITY

BY: _____
Gary LaBarbera
President

FOR NEW YORK CITY

BY: 
Michael R. Bloomberg
Mayor

APPROVED AS TO FORM:


ACTING CORPORATION COUNSEL
NEW YORK CITY

DEC 1 8 2009

List of Signatory Unions

Blasterers and Drillers Local #29

Bricklayers Local No. 1

Boiler Makers Local No. 5

Carpenters District Council

Cement Masons No. 780

Derrickmen and Riggers Union No. 197

Concrete Workers District Council No. 16, including Cement and Concrete Workers Nos. 6-A, 18-A, and 20

Electrical Local No. 3

Drywall Tapers 1974

Elevator Constructors No. 1

Heat & Frost Insulators Local Union No. 12A

Heat & Frost Insulators Local Union No. 12

Iron Workers No. 40

Iron Workers District Council

Laborers Local No. 78 Asbestos & Lead Abatement

Iron Workers No. 361

Laborers Construction and General Building No. 79

Laborers Local 731

Lathers Metallic Local No. 46

Local Union 8A Glaziers No. 1281

Mason Tenders District Council

Metal Polishers DC 9

Painters District Council No. 9

Painters Structural Steel No. 806

Ornamental Iron Workers No. 580

Plasters Local Union No. 262

Pavers & Road Builders District Council No. 1

Plumbers No. 1

Sheet Metal Workers Local No. 28

Roofers & Waterproofers No. 8

Sheet Metal Workers Local No. 137

Steamfitters Local Union No. 638; including Metal Trades Division

Teamsters Local Union 813

Teamsters Local Union 814

Tile, Marble & Terrazzo B.A.C. Local Union No. 7

PLA Schedule A

The following Collective Bargaining Agreements, as this Schedule may be amended from time to time in accordance with the Agreement, constitute Schedule A:

- (1) Agreement between the Boilermakers Association of Greater New York, Inc. and the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers AFL-CIO, Lodge No. 5, September 1, 2006 - December 31, 2009.
- (2) Agreement between Association of Cement and Concrete Contractors of New York, Inc. and Cement and Concrete Workers comprised of Local No. 6A, Local No. 18A, Local No. 20 and the Employer, July 1, 2008 - June 30, 2011.
- (3) Agreement between the Cement League and the District Council of Cement and Concrete Workers; Comprised of Local No. 6A, Local No. 18A, Local No. 20; July 1, 2008 - June 30, 2011.
- (4) Agreement between the Cement League and the United Cement Masons' Union Local No. 780, Clarified & Extended from October 23, 1940 to June 30, 2011.
- (5) Building Construction agreement between the Building Contractors Association, Inc. and the District Council of New York City and Vicinity of the United Brotherhood of Carpenters and Joiners of America, AFL-CIO, July 1, 2006 - June 30, 2011.
- (6) General Contractors Association - Carpenters 2006; Agreement Between Members of the General Contractors Association of New York, Inc. and the District Council of Carpenters of New York City and Vicinity, July 1, 2006 - June 30, 2011.
- (7) Trade Agreement between Drywall Tapers and Pointers of Greater New York Local Union 1974, affiliated with International Union of Painters and Allied Trades, AFL-CIO and Drywall Taping Contractors' Association of Greater New York and the Association of Wall-Ceiling & Carpentry Industry of New York, Inc., September 6, 2006 - June 28, 2011; Independent Agreement between Local Union 1974 and Employer.
- (8) Agreement between Allied Building Metal Industries, Inc. and Local Union Nos. 40 and 361 of the International Association of Bridge, Structural and Ornamental and Reinforcing Iron Workers AFL-CIO, July 1, 2008 - June 30, 2014.
- (9) Agreement between Independent Contractors and Local #46 Metallic Lathers Union and Reinforcing Ironworkers of New York and Vicinity of the International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers, July 1, 2008 - June 30, 2014.
- (10) Agreement of Working Conditions between the Independent Insulation Contractors Association of New York City Inc. and the International Association of Heat and Frost Insulators and Asbestos Workers Local No. 12 of New York City, 2008-2014.

- (11) Mason Tenders District Council of Greater New York Master Independent Collective Bargaining Agreement, 2008-2011.
- (12) Trade Agreement between District Council No. 9, International Union of Painters and Allied Trades, AFL-CIO and the Association of Master Painters and Decorators of New York, Inc. and the Association of Wall, Ceiling & Carpentry Industries of New York, Inc. and the Window and Plate Glass Dealers Association, May 1, 2005 - April 30, 2011.
- (13) Trade Agreement between Enterprise Association Local Union 638 and Mechanical Contractors Association of New York, Inc., July 1, 2008 - June 30, 2011.
- (14) Agreement between Allied Building Metal Industries Inc. and Architectural and Ornamental Iron Workers Local Union No. 580 AFL-CIO; July 1, 2008 - June 30, 2011.
- (15) Official Working Agreement between Service Contractors Division of the Mechanical Contractors Association of New York and Enterprise Association Metal Trades Branch Local Union 638, July 1, 2007 - June 30, 2010.
- (16) Agreement between Association of Contracting Plumbers of the City of New York, Inc. and Local Union No 1 of the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, July 1, 2007 - June 30, 2010.
- (17) Agreement and Working Rules between New York Electrical Contractors Association, Inc. and the Association of Electrical Contractors, Inc. and Local Union No. 3 International Brotherhood of Electrical Workers, AFL-CIO, May 10, 2007 - May 13, 2010.
- (18) Official Working Agreement between Service Contractors Division of the Mechanical Contractors Association of New York, Inc. and Enterprise Association Metal Trades Branch Local Union 638, Refrigeration, Air Conditioning, Air Cooling, Oil Burner and Stoker Service and Maintenance Technicians, July 1, 2007 - June 30, 2010.
- (19) Structural Steel and Bridge Painters of Greater New York, Local Union No. 806, District Council No. 9, International Union of Painters and Allied Trades, AFL-CIO, CLC and New York Structural Steel Painting Contractors Association, Inc.; Collective Bargaining Agreement, October 1, 2005 - September 30, 2011.
- (20) Trade Agreement between United Derrickmen & Riggers Association, Local No. 197 of New York, All-long Island, Westchester and Vicinity and Building Stone and Pre-Case Contractors Association, 2008.
- (21) Agreement between the Greater New York and New Jersey Tile Contractors Association, Inc., and the Tile Setters and Tile Finishers Union of New York and New Jersey, Local Union No. 7 of the International Union of Bricklayers and Allied Craftworkers, June 8, 2009 - June 2, 2013.

(22) Agreement between The Building Contractors Association, Inc. and International Union of Operating Engineers Local 15 and 15 A, July 1, 2006-June 30, 2011.

(23) Agreement dated as of July 1, 2006 between Building Contractors Association and International Union of Operating Engineers Local 14-14B, July 1, 2006-June 30, 2011.

(24) Agreement Between The Building Contractors Association, Inc. and International Union of Operating Engineers Local 15D affiliated with the AFL-CIO, July 1, 2006-June 30, 2011.

(25) Local 282 International Brotherhood of Teamsters High Rise Contract, Building Contractors Association and Independents, 2008-2013.

(26) Building, Concrete, Excavation & Common Laborers Union Local No. 731 Independent Agreement, July 1, 2006-June 30, 2012.

(27) March 17, 2009 Agreement between ThyssenKrupp Elevator Corp. and International Union of Elevator Constructors, Local 1 of NY and NJ, 2009-2014.

(28) Working Agreement Local Union No. 8 United Union of Roofers, Waterproofers and Allied Workers and Roofing and Waterproofing Contractor's Association of New York and Vicinity, July 1, 2009-June 30, 2011.

(29) Standard Form Collective Bargaining Agreement between Sheet Metal Workers' International Association Local Union #137 and the Greater New York Sign Association, July 16, 2007 - July 15, 2010.

(30) Trade Agreement between ____ and Local No. 1 New York of the International Union of Bricklayers and Allied Craftworkers, July 1, 2008 - July 30, 2011.

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NYC AGENCY RENOVATION & REHAB CITY OWNED BUILDINGS/STRUCTURES

Project Labor Agreement - - Letter of Assent

Dear:

The undersigned party confirms that it agrees to be a party to and be bound by the New York Agency, Project Labor Agreement as such Agreement may, from time to time, be amended by the parties or interpreted pursuant to its terms. The terms of the Project Labor Agreement, its Schedules, Addenda and Exhibits are hereby incorporated by reference herein.

The undersigned, as a Contractor or Subcontractor (hereinafter Contractor) on the Project known as _____ and located at _____ (hereinafter PROJECT), for and in consideration of the award to it of a contract to perform work on said PROJECT, and in further consideration of the mutual promises made in the Project Labor Agreement, a copy of which was received and is acknowledged, hereby:

- (1) Accepts and agrees to be bound by the terms and conditions of the Agreement, together with any and all schedules; amendments and supplements now existing or which are later made thereto;
- (2) Agrees to be bound by the legally established collective bargaining agreements and local trust agreements as set forth in the Project Labor Agreement and this Agreement but only to the extent of Program Work and as required by the PLA.
- (3) Authorizes the parties to such local trust agreements to appoint trustees and successor trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the Contractor but only to the extent of Program Work as required by the PLA.
- (4) Certifies that it has no commitments or agreements that would preclude its full and complete compliance with the terms and conditions of said Agreement. The Contractor agrees to employ labor that can work in harmony with all other labor on the Project and shall require labor harmony from every lower tier subcontractor it has engaged or may engage to work on the Project. Labor harmony disputes/issues shall be subject to the Labor Management Committee provisions.
- (5) Agrees to secure from any Contractor(s) (as defined in said Agreement) which is or becomes a Subcontractor (of any tier), to it, a duly executed Agreement to be Bound in from identical to this document.

Dated: _____

(Name of Contractor or subcontractor)

(Name of CM; GC; Contractor or
Higher Level Subcontractor)

(Authorized Officer & Title)

(Address)

(Phone) (Fax)

Contractor's State License

Sworn to before me this
_____ day of _____, 2009

Notary Public

STANDARDS OF EXCELLENCE

The purpose of this Standard of Excellence is to reinforce the pride of every construction worker and the commitment to be the most skilled, most productive and safest workforce available to construction employers and users in the City of New York. It is the commitment of every affiliated local union to use our training and skills to produce the highest quality work and to exercise safe and productive work practices.

The rank and file members represented by the affiliated local unions acknowledge and adopt the following standards:

- *Provide a full days work for a full days pay;*
- *Safely work towards the timely completion of the job;*
- *Arrive to work on time and work until the contractual quitting time;*
- *Adhere to contractual lunch and break times;*
- *Promote a drug and alcohol free work site;*
- *Work in accordance with all applicable safety rules and procedures;*
- *Allow union representatives to handle job site disputes and grievances without resort to slowdowns, or unlawful job disruptions;*
- *Respect management directives that are safe, reasonable and legitimate;*
- *Respect the rights of co-workers;*
- *Respect the property rights of the owner, management and contractors.*

The Unions affiliated with the New York City Building and Construction Trades Council will expect the signatory contractors to safely and efficiently manage their jobs and the unions see this as a corresponding obligation of the contractors under this Standard of Excellence. The affiliated unions will expect the following from its signatory contractors:

- *Management adherence to the collective bargaining agreements;*
- *Communication and cooperation with the trade foremen and stewards;*
- *Efficient, safe and sanitary management of the job site;*
- *Efficient job scheduling to mitigate and minimize unproductive time;*
- *Efficient and adequate staffing by properly trained employees by trade;*
- *Efficient delivery schedules and availability of equipment and tools to ensure efficient job progress;*
- *Ensure proper blueprints, specifications and layout instructions and material are available in a timely manner*
- *Promote job site dispute resolution and leadership skills to mitigate such disputes;*
- *Treatment of all employees in a respectful and dignified manner acknowledging their contributions to a successful project.*

The affiliated unions and their signatory contractors shall ensure that both the rank and file members and the management staff shall be properly trained in the obligations undertaken in the Standard of Excellence.

NOTICE TO BIDDERS

DAMAGES FOR DELAY PILOT PROGRAM

Please be advised that this contract is part of a pilot program in which the Standard Construction Contract provisions concerning delay damages have been revised to allow contractors to be reimbursed for specified additional costs that are attributable to a delay in the performance of the work resulting from certain acts or omissions of the City agency or its representatives. Certain changes are highlighted here to alert bidders to the pilot program. Please see Articles 11, 12.3, and 13.10 of the Standard Construction Contract for a full understanding and the actual text of the pilot program. The text of the revised Standard Construction Contract is the controlling document should there be any discrepancies between this notice and the Standard Construction Contract.

Changes to Articles 11, 12.3, and 13.10 of the Standard Construction Contract permit contractors to make claims for delay damages relating to the following circumstances:

The failure of the City to take reasonable measures to coordinate and progress the Work;

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

The unavailability of the site for an extended period of time that significantly affects the scheduled completion of the contract.

The issuance by the City of a stop work order relative to a substantial portion of work for a period exceeding thirty days, that was not brought about through any action or omission of the Contractor.

Differing site conditions that were not known or reasonably ascertainable on a pre-bid inspection of the site or review of the bid documents or other publicly available sources and that are not ordinarily encountered in the Project's geographical area or neighborhood or in the type of work to be performed.

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

Delays not contemplated by the parties;

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

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

Please see Article 11.4 for provisions regarding compensable delays.

Specific exclusions to claims for damages also apply, such as for third party (non-City) acts and omissions, court orders, strikes or *force majeure* events. For provisions related to non-compensable delays, please see Article 11.5.

For those delays where damages are available, Article 11 also sets forth what costs are recoverable. Please see Article 11.7 for which costs are recoverable and which costs are non-recoverable.

Article 11 also contains provisions concerning notice and documentation of claims. Please see Articles 11.1, 11.2, and 11.6. Contractors must comply with the notice requirements in order to preserve their claims. Consequently, please read these sections carefully. Delay damages are compensable only if they were actually, reasonably and necessarily incurred and are verified by appropriate documentation submitted at the appropriate times.

Claims for delay damages are not covered by the dispute resolution process in Article 27 of the Standard Construction Contract. See Article 11.8. When the amount of delay damages are agreed upon, such damages may be paid through a change order.

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

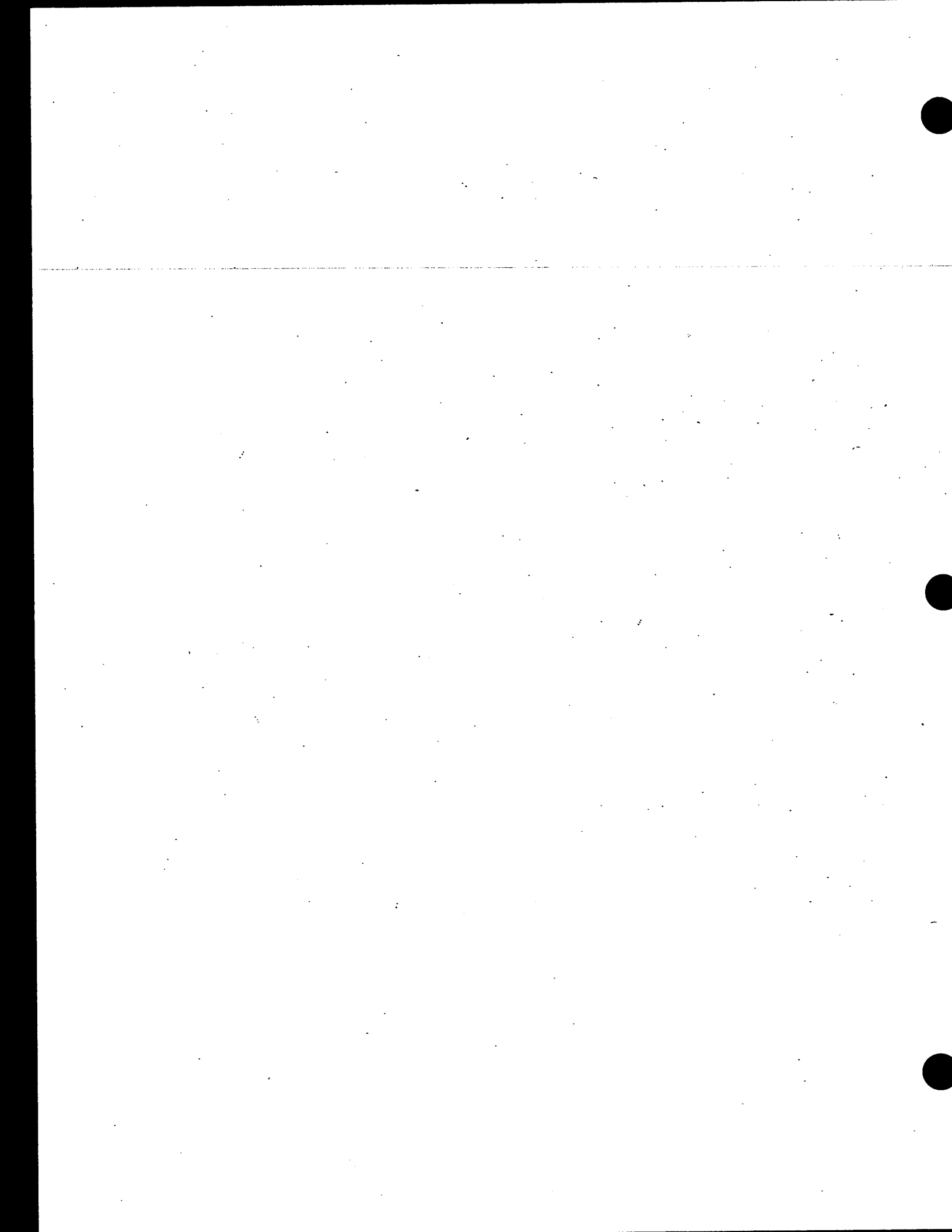
1. In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the New York City Administrative Code, respectively,
 - (a) Contractor shall not take an adverse personnel action with respect to an officer or employee in retaliation for such officer or employee making 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 do not exceed \$5 million. The form of bond required for contracts that are greater than \$5 million has not changed. The City now has two approved forms. One form is to be used for contracts that do not exceed \$5 million and one form is to be used for contracts above \$5 million. The City's payment bond remains unchanged.

The new 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. 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.



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 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.

RIDER

Pursuant to 44 CFR §13.36(i), the following provisions are inserted into the Contract:

1. The City shall have the right to terminate this Contract, in whole or in part, for cause or without cause. The City shall give no less than 30 days written notice of termination ("Termination Notice") for termination without cause and no less than 10 days notice for termination for cause unless a shorter time is determined by the Commissioner to be necessary. If the City terminates this Contract the City shall not incur or pay any further obligation pursuant to this Contract beyond the termination date set by the City in the Termination Notice. The City shall pay for services rendered or goods delivered in accordance with this Contract prior to the termination date. In addition, any obligation necessarily incurred by the Contractor on account of this Contract prior to receipt of notice of termination and falling due after the termination date shall be paid by the City in accordance with the terms of this Contract. In no event shall such obligation be construed as including any lease or other occupancy agreement, oral or written, entered into between the Contractor and its landlord.

2. In the event of a Default of Contractor's obligations under this Contract, the Commissioner, after declaring the Contractor in default, may have the services under the Contract completed by such means and in such manner, by contract with or without public letting, or otherwise, as he or she may deem advisable in accordance with applicable PPB Rules. After such completion, the Commissioner shall certify the expense incurred in such completion, which shall include the cost of re-letting. 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 promptly paid by the Contractor upon demand by the City. The excess expense of such completion, including any and all related and incidental costs, as so certified by the Commissioner, and any liquidated damages assessed against the Contractor, may be charged against and deducted out of monies earned by the Contractor.

3. If applicable, Contractor shall comply, and shall cause its subcontractors to comply with Executive Order 11246 of September 24, 1964, entitled "Equal Employment Opportunity" as amended by Executive Order 11375 of October 13, 1967 and supplemented in Department of Labor regulations (41 CFR Chapter 60).(applicable to all construction contracts awarded in excess of \$10,000)

4. If applicable, Contractor shall comply, and shall cause its subcontractors to comply with the Copeland "Anti-Kickback" Act (18 U.S.C 874) as supplemented in Department of Labor regulations (29 CFR Part 3).(applicable to contracts for construction or repair)

5. If applicable, Contractor shall comply, and cause its subcontractors to comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR Part 5).(applicable to construction contracts in excess of \$2,000)

6. If applicable, Contractor shall comply and cause its subcontractors to comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5).(applicable to construction contracts in excess of \$2,000, and in excess of \$2,500 for other contract which involve the employment of mechanics or laborers)

7. Contractor shall be required to produce and deliver such reports relating to the services performed under this Contract as may be required by the City or any other State or federal governmental agency with jurisdiction.

8. Pursuant to 44 CFR §13.34, if the services under this Contract are supported by a federal grant of funds FEMA reserves a royalty-free, non-exclusive, and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use, for Federal Government purposes: (1) the copyright in any work developed under a grant, subgrant, or contract under a grant or subgrant; and (2) any rights of copyright to which a grantee, subgrantee, or contractor purchases ownership with grant support.

9. Any reports, documents, data, photographs, deliverables, and/or other materials produced pursuant to this Contract ("Copyrightable Materials"), and any and all drafts and/or other preliminary materials in any format related to such items produced pursuant to this Contract, shall upon their creation become the exclusive property of the City. The Copyrightable Materials shall be considered "work-made-for-hire" within the meaning and purview of Section 101 of the United States Copyright Act, 17 U.S.C. § 101, and the City shall be the copyright owner thereof and of all aspects, elements and components thereof in which copyright protection might exist. To the extent that the Copyrightable Materials do not qualify as "work-made-for-hire," the Contractor hereby irrevocably transfers, assigns and conveys exclusive copyright ownership in and to the Copyrightable Materials to the City, free and clear of any liens, claims, or other encumbrances. The Contractor shall retain no copyright or intellectual property interest in the Copyrightable Materials.

10. The Contractor shall promptly and fully report to the Department any discovery or invention arising out of or developed in the course of performance of this Contract. If the services under this Contract are supported by a federal grant of funds, the Contractor shall promptly and fully report to the federal government for the federal government to make a determination as to whether patent protection on such invention shall be sought and how the rights in the invention or discovery, including rights under any patent issued thereon, shall be disposed of and administered in order to protect the public interest.

11. The Contractor shall grant access to the State, the City, FEMA, and/or the Comptroller General of the United States, or any of their duly authorized representatives, to any books, documents, papers, and/or records of the Contractor that are directly pertinent to the Contract for the purpose of making audit, examination, excerpts, and transcriptions. Contractor shall retain all books, documents, papers or records relating to the services performed under this

Contract for three years after final payment under this Contract is made and all other pending matters are closed.

12. For any contract or subcontract the value of which is in excess of \$100,000: The Contractor shall comply and shall cause its subcontractor to comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. §1857(h)), Section 508 of the Clean Water Act (33 U.S.C. §1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

13. The Contractor shall comply with mandatory standards and policies relating to energy efficiency that are contained in the State's energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

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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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CITY OF NEW YORK
DEPARTMENT OF
DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

INFORMATION FOR BIDDERS

December 2013

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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 in 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 reasonably have been 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 Officer or the contact 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. 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. 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 Form, multiplied by the corresponding unit prices, and including any lump sum bids on individual items.

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

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

34. Excise Tax

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

35. Licenses and Permits

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

36. Multiple Prime Contractors

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

37. Locally Based Enterprise Requirements (LBE)

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

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

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

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

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

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

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

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

- (2) The following documents shall be attached to the "LBE Participation Schedule":
- (a) verification letters from each subcontractor listed in the "LBE Participation Schedule" stating that the LBE will enter into a formal agreement for work,
 - (b) certification documents of any proposed LBE subcontractor which is not on the LBE certified list, and
 - (c) copies of the certification letter of any proposed subcontractor which is an LBE.
- (3) Documentation of good faith efforts to achieve the required LBE percentage shall include as appropriate but not limited to the following:
- (a) attendance at prebid meetings, when scheduled by the agency, to advise bidders of contract requirements;
 - (b) advertisement where appropriate in general circulation media, trade association publications and small business media of the specific subcontracts that would be at least equal to the percentage goal for LBE utilization specified by the contractor;
 - (c) written notification to association of small, minority and women contractors soliciting specific subcontractors;
 - (d) written notification by certified mail to LBE firms that their interest in the contract is solicited for specific work items and their estimated values;
 - (e) demonstration of efforts made to select portions of the work for performance by LBE firms in order to increase the likelihood of achieving the stated goal;
 - (f) documented efforts to negotiate with LBE firms for specific subcontracts, including at a minimum:
 - (i) The names, address and telephone numbers of LBE firms that are contacted;
 - (ii) A description of the information provided to LBE firms regarding the plans and specifications for portions of the work to be performed;
 - (iii) Documentation showing that no reasonable price can be obtained from LBE firms;
 - (iv) A statement of why agreements with LBE firms were not reached;
 - (g) a statement of the reason for rejecting any LBE firm which the contractor deemed to be unqualified; and
 - (h) documentation of efforts made to assist the LBE firms contacted that needed assistance in obtaining required insurance.

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

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

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

38. Bid Submission Requirements

The 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**

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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).

I. 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.

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.

A. 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.
- 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.
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
- 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.
- 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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NOTICE TO BIDDERS

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

Significant changes include the following:

ARTICLE 11 DAMAGES CAUSED BY DELAYS

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

ARTICLE 22 INSURANCE

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

ARTICLE 26 EXTRA WORK

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

ARTICLE 37 LABOR LAW REQUIREMENTS
ARTICLE 38 PAYROLL REPORTS

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

ARTICLE 70 ELECTRONIC FILING

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

Other significant changes include the following:

ARTICLE 7 INDEMNIFICATION

Changes have been made to the indemnification provisions.

ARTICLE 14 FINAL ACCEPTANCE OF WORK
ARTICLE 44 SUBSTANTIAL COMPLETION PAYMENT

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

ARTICLE 15 LIQUIDATED DAMAGES

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

ARTICLE 17 SUBCONTRACTS

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

ARTICLE 19 SECURITY DEPOSIT

The provisions governing the return of bid deposits are clarified.

ARTICLE 20 PAYMENT GUARANTEE

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

ARTICLE 28 RECORDKEEPING FOR EXTRA OR DISPUTED WORK

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

ARTICLE 35 EMPLOYEES

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

ARTICLE 38 PAYROLL REPORTS
ARTICLE 77 RECORDS RETENTION

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

ARTICLE 42 PARTIAL PAYMENTS

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

ARTICLE 62 TAX EXEMPTION

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

CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT

December 2013



*CITY OF NEW YORK
STANDARD CONSTRUCTION CONTRACT*

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WITNESSETH:

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

**CHAPTER I
THE CONTRACT AND DEFINITIONS**

ARTICLE 1. THE CONTRACT

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

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

1.1.2 The Contract Drawings and Specifications;

1.1.3 The General Conditions and Special Conditions, if any;

1.1.4 The Contract;

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

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

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

ARTICLE 2. DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CHAPTER II THE WORK AND ITS PERFORMANCE

ARTICLE 3. CHARACTER OF THE WORK

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

ARTICLE 4. MEANS AND METHODS OF CONSTRUCTION

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

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

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

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

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

ARTICLE 5. COMPLIANCE WITH LAWS

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

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

5.3 Noise Control Code provisions.

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

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

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

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

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

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

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

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

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

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

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

5.4.2 Ultra Low Sulfur Diesel Fuel

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

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

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

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

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

5.4.3 Best Available Technology

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

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

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

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

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

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

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

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

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

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

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

5.4.5 Compliance

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

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

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

5.4.6 Reporting

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 6. INSPECTION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CHAPTER III TIME PROVISIONS

ARTICLE 8. COMMENCEMENT AND PROSECUTION OF THE WORK

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

ARTICLE 9. PROGRESS SCHEDULES

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

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

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

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

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

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

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

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

ARTICLE 10. REQUESTS FOR INFORMATION OR APPROVAL

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

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

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

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

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

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

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

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

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

11.4 Compensable Delays

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

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

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

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

- 11.4.1.4 The issuance by the **Engineer** of a stop work order relative to a substantial portion of the **Work** for a period exceeding thirty (30) **Days**, that was not brought about through any action or omission of the **Contractor**.
- 11.4.1.5 Differing site conditions that were neither known nor reasonably ascertainable on a pre-bid inspection of the **Site** or review of the bid documents or other publicly available sources, and that are not ordinarily encountered in the **Project's** geographical area or neighborhood or in the type of **Work** to be performed.
- 11.4.1.6 Delays caused by the **City's** bad faith or its willful, malicious, or grossly negligent conduct;
- 11.4.1.7 Delays not contemplated by the parties;
- 11.4.1.8 Delays so unreasonable that they constitute an intentional abandonment of the **Contract** by the **City**; and
- 11.4.1.9 Delays resulting from the **City's** breach of a fundamental obligation of the **Contract**.

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

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

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

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

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

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

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

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

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

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

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

11.6 Required Content of Submission of Statement of Delay Damages

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

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

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

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

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

11.7 Recoverable Costs

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

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

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

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

11.7.1.4 Insurance and bond costs;

11.7.1.5 Extended field office costs;

11.7.1.6 Extended **Site** overhead; and

11.7.1.7 Extended home office overhead.

11.7.2 Recoverable Subcontractor Costs. When the **Work** is performed by a **Subcontractor**, the **Contractor** may be paid the actual and necessary costs of such subcontracted **Work** as outlined above in Articles 11.7.1.1 through 11.7.1.6, and an

additional overhead of five (5%) percent of the costs outlined in Articles 11.7.1.1 through 11.7.1.3.

11.7.3 Non-Recoverable Costs. The parties agree that the **City** will have no liability for the following items and the **Contractor** agrees it shall make no claim for the following items:

- 11.7.3.1 Profit, or loss of anticipated or unanticipated profit;
- 11.7.3.2 Consequential damages, including but not limited to interest on monies in dispute, including interest which is paid on such monies, loss of bonding capacity, bidding opportunities, or interest in investment, or any resulting insolvency;
- 11.7.3.3 Indirect costs or expenses of any nature;
- 11.7.3.4 Direct or indirect costs attributable to performance of **Work** where the **Contractor**, because of situations or conditions within its control, has not progressed the **Work** in a satisfactory manner; and
- 11.7.3.5 Attorneys' fees and dispute and claims preparation expenses.

11.8 Determinations under this Article 11 are not subject to the jurisdiction of the Contract Dispute Resolution Board pursuant to the dispute resolution process set forth in Article 27.

11.9 If the parties agree, pursuant to Article 11.1.3 above, that a compensable delay has occurred and agree on the amount of compensation, payment may be made pursuant to a written change order. Payment pursuant to such change order is subject to pre-audit by the **Engineering Audit Officer**, and may be post-audited by the **Comptroller** and/or the **Agency**.

ARTICLE 12. COORDINATION WITH OTHER CONTRACTORS

12.1 During the progress of the **Work**, **Other Contractors** may be engaged in performing other work or may be awarded other contracts for additional work on this **Project**. In that event, the **Contractor** shall coordinate the **Work** to be done hereunder with the work of such **Other Contractors** and the **Contractor** shall fully cooperate with such **Other Contractors** and carefully fit its own **Work** to that provided under other contracts as may be directed by the **Engineer**. The **Contractor** shall not commit or permit any act which will interfere with the performance of work by any **Other Contractors**.

12.2 If the **Engineer** determines that the **Contractor** is failing to coordinate its **Work** with the work of **Other Contractors** as the **Engineer** has directed, then the **Commissioner** shall have the right to withhold any payments otherwise due hereunder until the **Contractor** completely complies with the **Engineer's** directions.

12.3 The **Contractor** shall notify the **Engineer** in writing if any **Other Contractor** on this **Project** is failing to coordinate its work with the **Work** of this **Contract**. If the **Engineer** finds such charges to be true, the **Engineer** shall promptly issue such directions to the **Other Contractor** with respect thereto as the situation may require. The **City** shall not, however, be liable for any damages suffered by any **Other Contractor's** failure to coordinate its work with the **Work** of this **Contract** or by reason of the **Other Contractor's** failure to promptly comply with the directions so issued by the **Engineer**, or by reason of any **Other Contractor's** default in performance, it being understood that the **City** does not guarantee the responsibility or continued efficiency of any contractor. The **Contractor** agrees to make no claim against

the **City** for any damages relating to or arising out of any directions issued by the **Engineer** pursuant to this Article 12 (including but not limited to the failure of any **Other Contractor** to comply or promptly comply with such directions), or the failure of the **Engineer** to issue any directions, or the failure of any **Other Contractor** to coordinate its work, or the default in performance of any **Other Contractor**.

12.4 The **Contractor** shall indemnify and hold the **City** harmless from any and all claims or judgments for damages and from costs and expenses to which the **City** may be subjected or which it may suffer or incur by reason of the **Contractor's** failure to comply with the **Engineer's** directions promptly; and the **Comptroller** shall have the right to exercise the powers reserved in Article 23 with respect to any claims which may be made for damages due to the **Contractor's** failure to comply with the **Engineer's** directions promptly. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.5 Should the **Contractor** sustain any damage through any act or omission of any **Other Contractor** having a contract with the **City** for the performance of work upon the **Site** or of work which may be necessary to be performed for the proper prosecution of the **Work** to be performed hereunder, or through any act or omission of a subcontractor of such **Other Contractor**, the **Contractor** shall have no claim against the **City** for such damage, but shall have a right to recover such damage from the **Other Contractor** under the provision similar to the following provisions which apply to this **Contract** and have been or will be inserted in the contracts with such **Other Contractors**:

12.5.1 Should any **Other Contractor** having or who shall hereafter have a contract with the **City** for the performance of work upon the **Site** sustain any damage through any act or omission of the **Contractor** hereunder or through any act or omission of any **Subcontractor** of the **Contractor**, the **Contractor** agrees to reimburse such **Other Contractor** for all such damages and to defend at its own expense any action based upon such claim and if any judgment or claim (even if the allegations of the action are without merit) against the **City** shall be allowed the **Contractor** shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith and agrees to indemnify and hold the **City** harmless from all such claims. Insofar as the facts and **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent provided by **Law**.

12.6 The **City's** right to indemnification hereunder shall in no way be diminished, waived or discharged by its recourse to assessment of liquidated damages as provided in Article 15, or by the exercise of any other remedy provided for by **Contract** or by **Law**.

ARTICLE 13. EXTENSION OF TIME FOR PERFORMANCE

13.1 If performance by the **Contractor** is delayed for a reason set forth in Article 13.3, the **Contractor** may be allowed a reasonable extension of time in conformance with this Article 13 and the **PPB Rules**.

13.2 Any extension of time may be granted only by the **ACCO** or by the Board for the Extension of Time (hereafter "**Board**") (as set forth below) upon written application by the **Contractor**.

13.3 Grounds for Extension: If such application is made, the **Contractor** shall be entitled to an extension of time for delay in completion of the **Work** caused solely:

13.3.1 By the acts or omissions of the **City**, its officials, agents or employees; or

13.3.2 By the act or omissions of **Other Contractors** on this **Project**; or

13.3.3 By supervening conditions entirely beyond the control of either party hereto (such as, but not limited to, acts of God or the public enemy, excessive inclement weather, war or other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes not brought about by any act or omission of the **Contractor**).

13.3.4 The **Contractor** shall, however, be entitled to an extension of time for such causes only for the number of **Days** of delay which the **ACCO** or the Board may determine to be due solely to such causes, and then only if the **Contractor** shall have strictly complied with all of the requirements of Articles 9 and 10.

13.4 The **Contractor** shall not be entitled to receive a separate extension of time for each of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the **Work** as determined by the **ACCO** or the Board, irrespective of the number of causes contributing to produce such delay. If one of several causes of delay operating concurrently results from any act, fault or omission of the **Contractor** or of its **Subcontractors** or **Materialmen**, and would of itself (irrespective of the concurrent causes) have delayed the **Work**, no extension of time will be allowed for the period of delay resulting from such act, fault or omission.

13.5 The determination made by the **ACCO** or the Board on an application for an extension of time shall be binding and conclusive on the **Contractor**.

13.6 The **ACCO** or the Board acting entirely within their discretion may grant an application for an extension of time for causes of delay other than those herein referred.

13.7 Permitting the **Contractor** to continue with the **Work** after the time fixed for its completion has expired, or after the time to which such completion may have been extended has expired, or the making of any payment to the **Contractor** after such time, shall in no way operate as a waiver on the part of the **City** of any of its rights under this **Contract**.

13.8 Application for Extension of Time:

13.8.1 Before the **Contractor's** time extension request will be considered, the **Contractor** shall notify the **ACCO** of the condition which allegedly has caused or is causing the delay, and shall submit a written application to the **ACCO** identifying:

13.8.1(a) The **Contractor**; the registration number; and **Project** description;

13.8.1(b) Liquidated damage assessment rate, as specified in the **Contract**;

13.8.1(c) Original total bid price;

13.8.1(d) The original **Contract** start date and completion date;

13.8.1(e) Any previous time extensions granted (number and duration); and

13.8.1(f) The extension of time requested.

13.8.2 In addition, the application for extension of time shall set forth in detail:

13.8.2(a) The nature of each alleged cause of delay in completing the **Work**;

13.8.2(b) The date upon which each such cause of delay began and ended and the number of **Days** attributable to each such cause;

13.8.2(c) A statement that the **Contractor** waives all claims except for those delineated in the application, and the particulars of any claims which the **Contractor** does not agree to waive. For time extensions for **Substantial Completion** and final completion payments, the application shall include a detailed statement of the dollar amounts of each element of claim item reserved; and

13.8.2(d) A statement indicating the **Contractor's** understanding that the time extension is granted only for purposes of permitting continuation of **Contract** performance and payment for **Work** performed and that the **City** retains its right to conduct an investigation and assess liquidated damages as appropriate in the future.

13.9 Analysis and Approval of Time Extensions:

13.9.1 For time extensions for partial payments, a written determination shall be made by the **ACCO** who may, for good and sufficient cause, extend the time for the performance of the **Contract** as follows:

13.9.1(a) If the **Work** is to be completed within six (6) months, the time for performance may be extended for sixty (60) **Days**;

13.9.1(b) If the **Work** is to be completed within less than one (1) year but more than six (6) months, an extension of ninety (90) **Days** may be granted;

13.9.1(c) If the **Contract** period exceeds one (1) year, besides the extension granted in Article 13.9.1(b), an additional thirty (30) **Days** may be granted for each multiple of six (6) months involved beyond the one (1) year period; or

13.9.1(d) If exceptional circumstances exist, the **ACCO** may extend the time for performance beyond the extensions in Articles 13.9.1(a), 13.9.1(b), and 13.9.1(c). In that event, the **ACCO** shall file with the Mayor's Office of Contract Services a written explanation of the exceptional circumstances.

13.9.2 For extensions of time for **Substantial Completion** and final completion payments, the **Engineer**, in consultation with the **ACCO**, shall prepare a written analysis of the delay (including a preliminary determination of the causes of delay, the beginning and end dates for each such cause of delay, and whether the delays are excusable under the terms of this **Contract**). The report shall be subject to review by and approval of the Board, which shall have authority to question its analysis and determinations and request additional facts or documentation. The report as reviewed and made final by the Board shall be made a part of the **Agency** contract file. Neither the report itself nor anything contained therein shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

13.9.3 Approval Mechanism for Time Extensions for **Substantial Completion** or Final Completion Payments: An extension shall be granted only with the approval of the Board which is comprised of the **ACCO** of the **Agency**, the **City** Corporation Counsel, and the **Comptroller**, or their authorized representatives.

13.9.4 Neither the granting of any application for an extension of time to the **Contractor** or any **Other Contractor** on this **Project** nor the papers, records or reports related to any application for or grant of an extension of time or determination related thereto shall be referred to or offered in evidence by the **Contractor** or its attorneys in any action or proceeding.

13.10 No Damage for Delay: The **Contractor** agrees to make no claim for damages for delay in the performance of this **Contract** occasioned by any act or omission to act of the **City** or any of its representatives, except as provided for in Article 11.

ARTICLE 14. COMPLETION AND FINAL ACCEPTANCE OF THE WORK

14.1 Date for **Substantial Completion**: The **Contractor** shall substantially complete the **Work** within the time fixed in Schedule A of the General Conditions, or within the time to which such **Substantial Completion** may be extended.

14.2 Determining the Date of **Substantial Completion**: The **Work** will be deemed to be substantially complete when the two conditions set forth below have been met.

14.2.1 Inspection: The **Engineer** has inspected the **Work** and has made a written determination that it is substantially complete.

14.2.2 Approval of **Final Approved Punch List** and Date for **Final Acceptance**: Following inspection of the **Work**, the **Engineer** shall furnish the **Contractor** with a final punch list, specifying all items of **Work** to be completed and proposing dates for the completion of each specified item of **Work**. The **Contractor** shall then submit in writing to the **Engineer** within ten (10) **Days** of the **Engineer** furnishing the final punch list either acceptance of the dates or proposed alternative dates for the completion of each specified item of **Work**. If the **Contractor** proposes alternative dates, then, within a reasonable time after receipt, the **Engineer**, in a written notification to the **Contractor**, shall approve the **Contractor's** completion dates or, if they are unable to agree, the **Engineer** shall establish dates for the completion of each item of **Work**. If the **Contractor** neither accepts the dates nor proposes alternative dates within ten (10) **Days**, the schedule proposed by the **Engineer** shall be deemed accepted. The latest completion date specified shall be the date for **Final Acceptance** of the **Work**.

14.3 Date of **Substantial Completion**. The date of approval of the **Final Approved Punch List**, shall be the date of **Substantial Completion**. The date of approval of the **Final Approved Punch List** shall be either (a) if the **Contractor** approves the final punch list and proposed dates for completion furnished by the **Engineer**, the date of the **Contractor's** approval; or (b) if the **Contractor** neither accepts the dates nor proposes alternative dates, ten (10) **Days** after the **Engineer** furnishes the **Contractor** with a final punch list and proposed dates for completion; or (c) if the **Contractor** proposes alternative dates, the date that the **Engineer** sends written notification to the **Contractor** either approving the **Contractor's** proposed alternative dates or establishing dates for the completion for each item of **Work**.

14.4 Determining the Date of **Final Acceptance**: The **Work** will be accepted as final and complete as of the date of the **Engineer's** inspection if, upon such inspection, the **Engineer** finds that all items on the **Final Approved Punch List** are complete and no further **Work** remains to be done. The **Commissioner** will then issue a written determination of **Final Acceptance**.

14.5 Request for Inspection: Inspection of the **Work** by the **Engineer** for the purpose of **Substantial Completion** or **Final Acceptance** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

14.6 Request for Re-inspection: If upon inspection for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** determines that there are items of **Work** still to be performed, the **Contractor** shall promptly perform them and then request a re-inspection. If upon re-inspection, the **Engineer** determines that the **Work** is substantially complete or finally accepted, the date of such re-inspection shall be the date of **Substantial Completion** or **Final Acceptance**. Re-inspection by the **Engineer** shall be made within ten (10) **Days** after receipt of the **Contractor's** written request therefor.

14.7 Initiation of Inspection by the **Engineer**: If the **Contractor** does not request inspection or re-inspection of the **Work** for the purpose of **Substantial Completion** or **Final Acceptance**, the **Engineer** may initiate such inspection or re-inspection.

ARTICLE 15. LIQUIDATED DAMAGES

15.1 In the event the **Contractor** fails to substantially complete the **Work** within the time fixed for such **Substantial Completion** in Schedule A of the General Conditions, plus authorized time extensions, or if the **Contractor**, in the sole determination of the **Commissioner**, has abandoned the **Work**, the **Contractor** shall pay to the **City** the sum fixed in Schedule A of the General Conditions, for each and every **Day** that the time consumed in substantially completing the **Work** exceeds the time allowed therefor; which said sum, in view of the difficulty of accurately ascertaining the loss which the **City** will suffer by reason of delay in the **Substantial Completion** of the **Work** hereunder, is hereby fixed and agreed as the liquidated damages that the **City** will suffer by reason of such delay, and not as a penalty. This Article 15 shall also apply to the **Contractor** whether or not the **Contractor** is defaulted pursuant to Chapter X of this **Contract**. Neither the failure to assess liquidated damages nor the granting of any time extension shall operate as a waiver or release of any claim the **City** may have against the **Contractor** for either actual or liquidated damages.

15.2 Liquidated damages received hereunder are not intended to be nor shall they be treated as either a partial or full waiver or discharge of the **City's** right to indemnification, or the **Contractor's** obligation to indemnify the **City**, or to any other remedy provided for in this **Contract** or by **Law**.

15.3 The **Commissioner** may deduct and retain out of the monies which may become due hereunder, the amount of any such liquidated damages; and in case the amount which may become due hereunder shall be less than the amount of liquidated damages suffered by the **City**, the **Contractor** shall be liable to pay the difference.

ARTICLE 16. OCCUPATION OR USE PRIOR TO COMPLETION

16.1 Unless otherwise provided for in the **Specifications**, the **Commissioner** may take over, use, occupy or operate any part of the **Work** at any time prior to **Final Acceptance**, upon written notification to the **Contractor**. The **Engineer** shall inspect the part of the **Work** to be taken over, used, occupied, or operated, and will furnish the **Contractor** with a written statement of the **Work**, if any, which remains to be performed on such part. The **Contractor** shall not object to, nor interfere with, the **Commissioner's** decision to exercise the rights granted by Article 16. In the event the **Commissioner** takes over, uses, occupies, or operates any part of the **Work**:

16.1.1 the **Engineer** shall issue a written determination of **Substantial Completion** with respect to such part of the **Work**;

16.1.2 the **Contractor** shall be relieved of its absolute obligation to protect such part of the unfinished **Work** in accordance with Article 7;

16.1.3 the **Contractor's** guarantee on such part of the **Work** shall begin on the date of such use by the **City**; and;

16.1.4 the **Contractor** shall be entitled to a return of so much of the amount retained in accordance with Article 21 as it relates to such part of the **Work**, except so much thereof as may be retained under Articles 24 and 44.

CHAPTER IV SUBCONTRACTS AND ASSIGNMENTS

ARTICLE 17. SUBCONTRACTS

17.1 The **Contractor** shall not make subcontracts totaling an amount more than the percentage of the total **Contract** price fixed in Schedule A of the General Conditions, without prior written permission from the **Commissioner**. All subcontracts made by the **Contractor** shall be in writing. No **Work** may be performed by a **Subcontractor** prior to the **Contractor** entering into a written subcontract with the **Subcontractor** and complying with the provisions of this Article 17.

17.2 Before making any subcontracts, the **Contractor** shall submit a written statement to the **Commissioner** giving the name and address of the proposed **Subcontractor**; the portion of the **Work** and materials which it is to perform and furnish; the cost of the subcontract; the VENDEX questionnaire if required; the proposed subcontract if requested by the **Commissioner**; and any other information tending to prove that the proposed **Subcontractor** has the necessary facilities, skill, integrity, past experience, and financial resources to perform the **Work** in accordance with the terms and conditions of this **Contract**.

17.3 In addition to the requirements in Article 17.2, **Contractor** is required to list the **Subcontractor** in the web based Subcontractor Reporting System through the City's Payee Information Portal (PIP), available at www.nyc.gov/pip.¹ For each **Subcontractor** listed, **Contractor** is required to provide the following information: maximum contract value, description of **Subcontractor's** **Work**, start and end date of the subcontract and identification of the **Subcontractor's** industry. Thereafter, **Contractor** will be required to report in the system the payments made to each **Subcontractor** within 30 days of making the payment. If any of the required information changes throughout the Term of the **Contract**, **Contractor** will be required to revise the information in the system.

Failure of the **Contractor** to list a **Subcontractor** and/or to report **Subcontractor** payments in a timely fashion may result in the **Commissioner** declaring the **Contractor** in default of the **Contract** and will subject **Contractor** to liquidated damages in the amount of \$100 per day for each day that the **Contractor** fails to identify a **Subcontractor** along with the required information about the **Subcontractor** and/or fails to report payments to a **Subcontractor**, beyond the time frames set forth herein or in the notice from the **City**. Article 15 shall govern the issue of liquidated damages.

¹ In order to use the new system, a PIP account will be required. Detailed instructions on creating a PIP account and using the new system are also available at www.nyc.gov/pip. Additional assistance with PIP may be obtained by emailing the Financial Information Services Agency Help Desk at pip@fisa.nyc.gov.

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

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

17.6 Before entering into any subcontract hereunder, the **Contractor** shall provide the proposed **Subcontractor** with a complete copy of this document and inform the proposed **Subcontractor** fully and completely of all provisions and requirements of this **Contract** relating either directly or indirectly to the **Work** to be performed and the materials to be furnished under such subcontract, and every such **Subcontractor** shall expressly stipulate that all labor performed and materials furnished by the **Subcontractor** shall strictly comply with the requirements of this **Contract**.

17.7 Documents given to a prospective **Subcontractor** for the purpose of soliciting the **Subcontractor's** bid shall include either a copy of the bid cover or a separate information sheet setting forth the **Project** name, the **Contract** number (if available), the **Agency** (as noted in Article 2.1.6), and the **Project's** location.

17.8 The **Commissioner's** approval of a **Subcontractor** shall not relieve the **Contractor** of any of its responsibilities, duties, and liabilities hereunder. The **Contractor** shall be solely responsible to the **City** for the acts or defaults of its **Subcontractor** and of such **Subcontractor's** officers, agents, and employees, each of whom shall, for this purpose, be deemed to be the agent or employee of the **Contractor** to the extent of its subcontract.

17.9 If the **Subcontractor** fails to maintain the necessary facilities, skill, integrity, past experience, and financial resources (other than due to the **Contractor's** failure to make payments where required) to perform the **Work** in accordance with the terms and conditions of this **Contract**, the **Contractor** shall promptly notify the **Commissioner** and replace such **Subcontractor** with a newly approved **Subcontractor** in accordance with this Article 17.

17.10 The **Contractor** shall be responsible for ensuring that all **Subcontractors** performing **Work** at the **Site** maintain all insurance required by **Law**.

17.11 The **Contractor** shall promptly, upon request, file with the **Engineer** a conformed copy of the subcontract and its cost. The subcontract shall provide the following:

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

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

17.11.3 Section 6-123 of the Administrative Code: Pursuant to the requirements of Section 6-123 of the Administrative Code, every agreement between the **Contractor** and a **Subcontractor** in excess of fifty thousand (\$50,000) dollars shall include a provision that the **Subcontractor** shall not engage in any unlawful discriminatory practice as defined in Title VIII of the Administrative Code (Section 8-101 *et seq.*).

17.11.4 All requirements required pursuant to federal and/or state grant agreement(s), if applicable to the **Work**.

17.12 The **Commissioner** may deduct from the amounts certified under this **Contract** to be due to the **Contractor**, the sum or sums due and owing from the **Contractor** to the **Subcontractors** according to the terms of the said subcontracts, and in case of dispute between the **Contractor** and its **Subcontractor**, or **Subcontractors**, as to the amount due and owing, the **Commissioner** may deduct and withhold from the amounts certified under this **Contract** to be due to the **Contractor** such sum or sums as may be claimed by such **Subcontractor**, or **Subcontractors**, in a sworn affidavit, to be due and owing until such time as such claim or claims shall have been finally resolved.

17.13 On contracts where performance bonds and payment bonds are executed, the **Contractor** shall include on each requisition for payment the following data: **Subcontractor's** name, value of the subcontract, total amount previously paid to **Subcontractor** for **Work** previously requisitioned, and the amount, including retainage, to be paid to the **Subcontractor** for **Work** included in the requisition.

17.14 On **Contracts** where performance bonds and payment bonds are not executed, the **Contractor** shall include with each requisition for payment submitted hereunder, a signed statement from each and every **Subcontractor** and/or **Materialman** for whom payment is requested in such requisition. Such signed statement shall be on the letterhead of the **Subcontractor** and/or **Materialman** for whom payment is requested and shall (i) verify that such **Subcontractor** and/or **Materialman** has been paid in full for all **Work** performed and/or material supplied to date, exclusive of any amount retained and any amount included on the current requisition, and (ii) state the total amount of retainage to date, exclusive of any amount retained on the current requisition.

ARTICLE 18. ASSIGNMENTS

18.1 The **Contractor** shall not assign, transfer, convey or otherwise dispose of this **Contract**, or the right to execute it, or the right, title or interest in or to it or any part thereof, or assign, by power of attorney or otherwise any of the monies due or to become due under this **Contract**, unless the previous written consent of the **Commissioner** shall first be obtained thereto, and the giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments.

18.2 Such assignment, transfer, conveyance or other disposition of this **Contract** shall not be valid until filed in the office of the **Commissioner** and the **Comptroller**, with the written consent of the **Commissioner** endorsed thereon or attached thereto.

18.3 Failure to obtain the previous written consent of the **Commissioner** to such an assignment, transfer, conveyance or other disposition, may result in the revocation and annulment of this **Contract**. The **City** shall thereupon be relieved and discharged from any further liability to the **Contractor**, its assignees, transferees or sublessees, who shall forfeit and lose all monies therefor earned under the **Contract**, except so much as may be required to pay the **Contractor's** employees.

18.4 The provisions of this clause shall not hinder, prevent, or affect an assignment by the **Contractor** for the benefit of its creditors made pursuant to the **Laws** of the State of New York.

18.5 This **Contract** may be assigned by the **City** to any corporation, agency or instrumentality having authority to accept such assignment.

**CHAPTER V
CONTRACTOR'S SECURITY AND GUARANTEE**

ARTICLE 19. SECURITY DEPOSIT

19.1 If performance and payment bonds are required, the **City** shall retain the bid security to ensure that the successful bidder executes the **Contract** and furnishes the required payment and performance security within ten (10) **Days** after notice of the award of the **Contract**. If the successful bidder fails to execute the **Contract** and furnish the required payment and performance security, the **City** shall retain such bid security as set forth in the Information for Bidders. If the successful bidder executes the **Contract** and furnishes the required payment and performance security, the **City** shall return the bid security within a reasonable time after the furnishing of such bonds and execution of the **Contract** by the **City**.

19.2 If performance and payment bonds are not required, the bid security shall be retained by the **City** as security for the **Contractor's** faithful performance of the **Contract**. If partial payments are provided, the bid security will be returned to the **Contractor** after the sum retained under Article 21 equals the amount of the bid security, subject to other provisions of this **Contract**. If partial payments are not provided, the bid security will be released when final payment is certified by the **City** for payment.

19.3 If the **Contractor** is declared in default under Article 48 prior to the return of the deposit, or if any claim is made such as referred to in Article 23, the amount of such deposit, or so much thereof as the **Comptroller** may deem necessary, may be retained and then applied by the **Comptroller**:

19.3.1 To compensate the **City** for any expense, loss or damage suffered or incurred by reason of or resulting from such default, including the cost of re-letting and liquidated damages; or

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

ARTICLE 20. PAYMENT GUARANTEE

20.1 On **Contracts** where one hundred (100%) percent performance bonds and payment bonds are executed, this Article 20 does not apply.

20.2 In the event the terms of this **Contract** do not require the **Contractor** to provide a payment bond or where the **Contract** does not require a payment bond for one hundred (100%) percent of the **Contract** price, the **City** shall, in accordance with the terms of this Article 20, guarantee payment of all lawful claims for:

20.2.1 Wages and compensation for labor performed and/or services rendered; and

20.2.2 Materials, equipment, and supplies provided, whether incorporated into the **Work** or not, when demands have been filed with the **City** as provided hereinafter by any person, firm, or corporation which furnished labor, material, equipment, supplies, or any combination thereof, in connection with the **Work** performed hereunder (hereinafter referred to as the "beneficiary") at the direction of the **City** or the **Contractor**.

20.3 The provisions of Article 20.2 are subject to the following limitations and conditions:

20.3.1 If the **Contractor** provides a payment bond for a value that is less than one hundred (100%) percent of the value of the **Contract Work**, the payment bond provided by the **Contractor** shall be primary (and non-contributing) to the payment guarantee provided under this Article 20.

20.3.2 The guarantee is made for the benefit of all beneficiaries as defined in Article 20.2 provided that those beneficiaries strictly adhere to the terms and conditions of Article 20.3.4 and 20.3.5.

20.3.3 Nothing in this Article 20 shall prevent a beneficiary providing labor, services or material for the **Work** from suing the **Contractor** for any amounts due and owing the beneficiary by the **Contractor**.

20.3.4 Every person who has furnished labor or material, to the **Contractor** or to a **Subcontractor** of the **Contractor**, in the prosecution of the **Work** and who has not been paid in full therefor before the expiration of a period of ninety (90) **Days** after the date on which the last of the labor was performed or material was furnished by him/her for which the claim is made, shall have the right to sue on this payment guarantee in his/her own name for the amount, or the balance thereof, unpaid at the time of commencement of the action; provided, however, that a person having a direct contractual relationship with a **Subcontractor** of the **Contractor** but no contractual relationship express or implied with the **Contractor** shall not have a right of action upon the guarantee unless he/she shall have given written notice to the **Contractor** within one hundred twenty (120) **Days** from the date on which the last of the labor was performed or the last of the material was furnished, for which his/her claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the material was furnished or for whom the labor was performed. The notice shall be served by delivering the same personally to the **Contractor** or by mailing the same by registered mail, postage prepaid, in an envelope addressed to the **Contractor** at any place where it maintains an office or conducts its business; provided, however, that where such notice is actually received by the **Contractor** by other means, such notice shall be deemed sufficient.

20.3.5 Except as provided in Labor Law Section 220-g, no action on this payment guarantee shall be commenced after the expiration of the one-year limitations period set forth in Section 137(4)(b) of the State Finance Law.

20.3.6 The **Contractor** shall promptly forward to the **City** any notice or demand received pursuant to Article 20.3.4. The **Contractor** shall inform the **City** of any defenses to the notice or demand and shall forward to the **City** any documents the **City** requests concerning the notice or demand.

20.3.7 All demands made against the **City** by a beneficiary of this payment guarantee shall be presented to the **Engineer** along with all written documentation concerning the demand which the **Engineer** deems reasonably appropriate or necessary, which may include, but shall not be limited to: the subcontract; any invoices presented to the **Contractor** for payment; the notarized statement of the beneficiary that the demand is due and payable, that a request for payment has been made of the **Contractor** and that the demand has not been paid by the **Contractor** within the time allowed for such payment by the subcontract; and copies of any correspondence between the beneficiary and the **Contractor** concerning such demand. The **City** shall notify the **Contractor** that a demand has been made. The **Contractor** shall inform the **City** of any defenses to the demand and shall forward to the **City** any documents the **City** requests concerning the demand.

20.3.8 The **City** shall make payment only if, after considering all defenses presented by the **Contractor**, it determines that the payment is due and owing to the beneficiary making the demand.

20.3.9 No beneficiary shall be entitled to interest from the **City**, or to any other costs, including, but not limited to, attorneys' fees, except to the extent required by State Finance Law Section 137.

20.4 Upon the receipt by the **City** of a demand pursuant to this Article 20, the **City** may withhold from any payment otherwise due and owing to the **Contractor** under this **Contract** an amount sufficient to satisfy the demand.

20.4.1 In the event the **City** determines that the demand is valid, the **City** shall notify the **Contractor** of such determination and the amount thereof and direct the **Contractor** to immediately pay such amount to the beneficiary. In the event the **Contractor**, within seven (7) **Days** of receipt of such notification from the **City**, fails to pay the beneficiary, such failure shall constitute an automatic and irrevocable assignment of payment by the **Contractor** to the beneficiary for the amount of the demand determined by the **City** to be valid. The **Contractor**, without further notification or other process, hereby gives its unconditional consent to such assignment of payment to the beneficiary and authorizes the **City**, on its behalf, to take all necessary actions to implement such assignment of payment, including without limitation the execution of any instrument or documentation necessary to effectuate such assignment.

20.4.2 In the event that the amount otherwise due and owing to the **Contractor** by the **City** is insufficient to satisfy such demand, the **City** may, at its option, require payment from the **Contractor** of an amount sufficient to cover such demand and exercise any other right to require or recover payment which the **City** may have under **Law** or **Contract**.

20.4.3 In the event the **City** determines that the demand is invalid, any amount withheld pending the **City's** review of such demand shall be paid to the **Contractor**; provided, however, no lien has been filed. In the event a claim or an action has been filed, the terms and conditions set forth in Article 23 shall apply. In the event a lien has been filed, the parties will be governed by the provisions of the Lien Law of the State of New York.

20.5 The provisions of this Article 20 shall not prevent the **City** and the **Contractor** from resolving disputes in accordance with the **PPB** Rules, where applicable.

20.6 In the event the **City** determines that the beneficiary is entitled to payment pursuant to this Article 20, such determination and any defenses and counterclaims raised by the **Contractor** shall be taken into account in evaluating the **Contractor's** performance.

20.7 Nothing in this Article 20 shall relieve the **Contractor** of the obligation to pay the claims of all persons with valid and lawful claims against the **Contractor** relating to the **Work**.

20.8 The **Contractor** shall not require any performance, payment or other bonds of any **Subcontractor** if this **Contract** does not require such bonds of the **Contractor**.

20.9 The payment guarantee made pursuant to this Article 20 shall be construed in a manner consistent with Section 137 of the State Finance Law and shall afford to persons furnishing labor or materials to the **Contractor**, or its **Subcontractors** in the prosecution of the **Work** under this **Contract** all of the rights and remedies afforded to such persons by such section, including but not limited to, the right

to commence an action against the **City** on the payment guarantee provided by this Article 20 within the one-year limitations period set forth in Section 137(4)(b).

ARTICLE 21. RETAINED PERCENTAGE

21.1 If this **Contract** requires one hundred (100%) percent performance and payment security, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.2 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded does not exceed one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, five (5%) percent of the value of **Work** certified for payment in each partial payment voucher.

21.3 If this **Contract** does not require one hundred (100%) percent performance and payment security and if the price for which this **Contract** was awarded exceeds one million (\$1,000,000) dollars, then as further security for the faithful performance of this **Contract**, the **Commissioner** shall deduct, and retain until the substantial completion of the **Work**, up to ten (10%) percent of the value of **Work** certified for payment in each partial payment voucher. The percentage to be retained is set forth in Schedule A of the General Conditions.

ARTICLE 22. INSURANCE

22.1 Types of Insurance: The **Contractor** shall procure and maintain the following types of insurance if, and as indicated, in Schedule A of the General Conditions (with the minimum limits and special conditions specified in Schedule A). Such insurance shall be maintained from the date the **Contractor** is required to provide Proof of Insurance pursuant to Article 22.3.1 through the date of completion of all required **Work** (including punch list work as certified in writing by the **Resident Engineer**), except for insurance required pursuant to Article 22.1.4, which may terminate upon **Substantial Completion** of the **Contract**. All insurance shall meet the requirements set forth in this Article 22. Wherever this Article requires that insurance coverage be "at least as broad" as a specified form (including all ISO forms), there is no obligation that the form itself be used, provided that the **Contractor** can demonstrate that the alternative form or endorsement contained in its policy provides coverage at least as broad as the specified form.

22.1.1 Commercial General Liability Insurance: The **Contractor** shall provide Commercial General Liability Insurance covering claims for property damage and/or bodily injury, including death, which may arise from any of the operations under this **Contract**. Coverage under this insurance shall be at least as broad as that provided by the latest edition of Insurance Services Office ("ISO") Form CG 0001. Such insurance shall be "occurrence" based rather than "claims-made" and include, without limitation, the following types of coverage: premises operations; products and completed operations; contractual liability (including the tort liability of another assumed in a contract); broad form property damage; independent contractors; explosion, collapse and underground (XCU); construction means and methods; and incidental malpractice. Such insurance shall contain a "per project" aggregate limit, as specified in Schedule A, that applies separately to operations under this **Contract**.

22.1.1(a) Such Commercial General Liability Insurance shall name the **City** as an Additional Insured. Coverage for the **City** shall specifically include the **City's** officials and employees, be at least as broad as the latest edition of ISO Form CG 20 10 and provide completed operations coverage at least as broad as the latest edition of ISO Form CG 20 37.

22.1.1(b) Such Commercial General Liability Insurance shall name all other entities designated as additional insureds in Schedule A but only for claims arising from the **Contractor's** operations under this **Contract**, with coverage at least as broad as the latest edition of ISO Form CG 20 26.

22.1.1(c) If the **Work** requires a permit from the Department of Buildings pursuant to 1 RCNY Section 101-08, at http://www.nyc.gov/html/dob/downloads/rules/1_RCNY_101-08.pdf, the **Contractor** shall provide Commercial General Liability Insurance with limits of at least those required by 1 RCNY section 101-08. If the **Work** does not require such a permit, the minimum limits shall be those provided for in Schedule A.

22.1.1(d) If any of the **Work** includes repair of a waterborne vessel owned by or to be delivered to the **City**, such Commercial General Liability shall include, or be endorsed to include, Ship Repairer's Legal Liability Coverage to protect against, without limitation, liability arising from navigation of such vessels prior to delivery to and acceptance by the **City**.

22.1.2 Workers' Compensation Insurance, Employers' Liability Insurance, and Disability Benefits Insurance: The **Contractor** shall provide, and shall cause its **Subcontractors** to provide, Workers Compensation Insurance, Employers' Liability Insurance, and Disability Benefits Insurance in accordance with the **Laws** of the State of New York on behalf of all employees providing services under this **Contract** (except for those employees, if any, for which the **Laws** require insurance only pursuant to Article 22.1.3).

22.1.3 United States Longshoremen's and Harbor Workers Act and/or Jones Act Insurance: If specified in Schedule A of the General Conditions or if required by **Law**, the **Contractor** shall provide insurance in accordance with the United States Longshoremen's and Harbor Workers Act and/or the Jones Act, on behalf of all qualifying employees providing services under this **Contract**.

22.1.4 Builders Risk Insurance: If specified in Schedule A of the General Conditions, the **Contractor** shall provide Builders Risk Insurance on a completed value form for the total value of the **Work** through **Substantial Completion** of the **Work** in its entirety. Such insurance shall be provided on an All Risk basis and include coverage, without limitation, for windstorm (including named windstorm), storm surge, flood and earth movement. Unless waived by the **Commissioner**, it shall include coverage for ordinance and law, demolition and increased costs of construction, debris removal, pollutant clean up and removal, and expediting costs. Such insurance shall cover, without limitation, (a) all buildings and/or structures involved in the **Work**, as well as temporary structures at the **Site**, and (b) any property that is intended to become a permanent part of such building or structure, whether such property is on the **Site**, in transit or in temporary storage. Policies shall name the **Contractor** as Named Insured and list the **City** as both an Additional Insured and a Loss Payee as its interest may appear.

22.1.4(a) Policies of such insurance shall specify that, in the event a loss occurs at an occupied facility, occupancy of such facility is permitted without the consent of the issuing insurance company.

22.1.4(b) Such insurance may be provided through an Installation Floater, at the **Contractor's** option, if it otherwise conforms with the requirements of this Article 22.1.4.

22.1.5 Commercial Automobile Liability Insurance: The **Contractor** shall provide Commercial Automobile Liability Insurance for liability arising out of ownership, maintenance or use of any owned (if any), non-owned and hired vehicles to be used in connection with this **Contract**. Coverage shall be at least as broad as the latest edition of ISO Form CA0001. If vehicles are used for transporting hazardous materials, the Automobile Liability Insurance shall be endorsed to provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90.

22.1.6 Contractors Pollution Liability Insurance: If specified in Schedule A of the General Conditions, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Contractors Pollution Liability Insurance covering bodily injury and property damage. Such insurance shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants (including asbestos), including any loss, cost or expense incurred as a result of any cleanup of pollutants (including asbestos) or in the investigation, settlement or defense of any claim, action, or proceedings arising from the operations under this **Contract**. Such insurance shall be in the **Contractor's** name and list the **City** as an Additional Insured and any other entity specified in Schedule A. Coverage shall include, without limitation, (a) loss of use of damaged property or of property that has not been physically injured, (b) transportation, and (c) non-owned disposal sites.

22.1.6(a) Coverage for the **City** as Additional Insured shall specifically include the **City's** officials and employees and be at least as broad as provided to the **Contractor** for this **Project**.

22.1.6(b) If such insurance is written on a claims-made policy, such policy shall have a retroactive date on or before the effective date of this **Contract**, and continuous coverage shall be maintained, or an extended discovery period exercised, for a period of not less than three (3) years from the time the **Work** under this **Contract** is completed.

22.1.7 Marine Insurance:

22.1.7(a) Marine Protection and Indemnity Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Marine Protection and Indemnity Insurance with coverage at least as broad as Form SP-23. The insurance shall provide coverage for the **Contractor** or **Subcontractor** (whichever is doing this **Work**) and for the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured for bodily injury and property damage arising from marine operations under this **Contract**. Coverage shall include, without limitation, injury or death of crew members (if not fully provided through other insurance), removal of wreck, damage to piers, wharves and other fixed or floating objects and loss of or damage to any other vessel or craft, or to property on such other vessel or craft.

22.1.7(b) Hull and Machinery Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Hull and Machinery Insurance with coverage for the **Contractor** or **Subcontractor** (whichever is doing this **Work**) and for the **City** (together with its officials and employees) as Additional Insured at least as broad as the latest edition of American Institute Tug Form for all tugs used under this **Contract** and Collision Liability at least as broad as the latest edition of American Institute Hull Clauses.

22.1.7(c) Marine Pollution Liability Insurance: If specified in Schedule A of the General Conditions or if the **Contractor** engages in marine operations in the execution of any part of the **Work**, the **Contractor** shall maintain, or cause the **Subcontractor** doing such **Work** to maintain, Marine Pollution Liability Insurance covering itself (or the **Subcontractor** doing such **Work**) as Named Insured and the **City** (together with its officials and employees) and any other entity specified in Schedule A as an Additional Insured. Coverage shall be at least as broad as that provided by the latest edition of Water Quality Insurance Syndicate Form and include, without limitation, liability arising from the discharge or substantial threat of a discharge of oil, or from the release or threatened release of a hazardous substance including injury to, or economic losses resulting from, the destruction of or damage to real property, personal property or natural resources.

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

22.2 General Requirements for Insurance Coverage and Policies:

22.2.1 All required insurance policies shall be maintained with companies that may lawfully issue the required policy and have an A.M. Best rating of at least A-/VII or a Standard and Poor's rating of at least A, unless prior written approval is obtained from the **City** Corporation Counsel.

22.2.2 The **Contractor** shall be solely responsible for the payment of all premiums for all required policies and all deductibles and self-insured retentions to which such policies are subject, whether or not the **City** is an insured under the policy.

22.2.3 In his/her sole discretion, the **Commissioner** may, subject to the approval of the **Comptroller** and the **City** Corporation Counsel, accept Letters of Credit and/or custodial accounts in lieu of required insurance.

22.2.4 The **City's** limits of coverage for all types of insurance required pursuant to Schedule A of the General Conditions shall be the greater of (i) the minimum limits set forth in Schedule A or (ii) the limits provided to the **Contractor** as Named Insured under all primary, excess, and umbrella policies of that type of coverage.

22.2.5 The **Contractor** may satisfy its insurance obligations under this Article 22 through primary policies or a combination of primary and excess/umbrella policies, so long as all policies provide the scope of coverage required herein.

22.2.6 Policies of insurance provided pursuant to this Article 22 shall be primary and non-contributing to any insurance or self-insurance maintained by the **City**.

22.3 Proof of Insurance:

22.3.1 For all types of insurance required by Article 22.1 and Schedule A, except for insurance required by Articles 22.1.4 and 22.1.7, the **Contractor** shall file proof of insurance in accordance with this Article 22.3 within ten (10) **Days** of award. For insurance provided pursuant to Articles 22.1.4 and 22.1.7, proof shall be filed by a date specified by the **Commissioner** or ten (10) **Days** prior to the commencement of the portion of the **Work** covered by such policy, whichever is earlier.

22.3.2 For Workers' Compensation Insurance provided pursuant to Article 22.1.2, the **Contractor** shall submit one of the following forms: C-105.2 Certificate of Workers' Compensation Insurance; U-26.3 - State Insurance Fund Certificate of Workers' Compensation Insurance; Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. For Disability Benefits Insurance provided pursuant to Article 22.1.2, the Contractor shall submit DB-120.1 - Certificate Of Insurance Coverage Under The NYS Disability Benefits Law, Request for WC/DB Exemption (Form CE-200); equivalent or successor forms used by the New York State Workers' Compensation Board; or other proof of insurance in a form acceptable to the **Commissioner**. ACORD forms are not acceptable.

22.3.3 For policies provided pursuant to all of Article 22.1 other than Article 22.1.2, the **Contractor** shall submit one or more Certificates of Insurance on forms acceptable to the **Commissioner**. All such Certificates of Insurance shall certify (a) the issuance and effectiveness of such policies of insurance, each with the specified minimum limits (b) for insurance secured pursuant to Article 22.1.1 that the **City** and any other entity specified in Schedule A is an Additional Insured with coverage at least as broad as the most recent edition of ISO Forms CG 20 10, CG 20 37, and CG 20 26, as applicable; (c) in the event insurance is required pursuant to Article 22.1.6 and/or Article 22.1.7, that the **City** is an Additional Insured thereunder; (d) the company code issued to the insurance company by the National Association of Insurance Commissioners (the NAIC number); and (e) the number assigned to the **Contract** by the **City**. All such Certificates of Insurance shall be accompanied by either a duly executed "Certification by Broker" in the form contained in Part III of Schedule A or copies of all policies referenced in such Certificate of Insurance as certified by an authorized representative of the issuing insurance carrier. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

22.3.4 Documentation confirming renewals of insurance shall be submitted to the **Commissioner** prior to the expiration date of coverage of policies required under this **Contract**. Such proofs of insurance shall comply with the requirements of Articles 22.3.2 and 22.3.3.

22.3.5 The **Contractor** shall be obligated to provide the **City** with a copy of any policy of insurance provided pursuant to this Article 22 upon the demand for such policy by the **Commissioner** or the **City** Corporation Counsel.

22.4 Operations of the Contractor:

22.4.1 The **Contractor** shall not commence the **Work** unless and until all required certificates have been submitted to and accepted by the **Commissioner**. Acceptance by the **Commissioner** of a certificate does not excuse the **Contractor** from securing insurance

consistent with all provisions of this Article 22 or of any liability arising from its failure to do so.

22.4.2 The **Contractor** shall be responsible for providing continuous insurance coverage in the manner, form, and limits required by this **Contract** and shall be authorized to perform **Work** only during the effective period of all required coverage.

22.4.3 In the event that any of the required insurance policies lapse, are revoked, suspended or otherwise terminated, for whatever cause, the **Contractor** shall immediately stop all **Work**, and shall not recommence **Work** until authorized in writing to do so by the **Commissioner**. Upon quitting the **Site**, except as otherwise directed by the **Commissioner**, the **Contractor** shall leave all plant, materials, equipment, tools, and supplies on the **Site**. **Contract** time shall continue to run during such periods and no extensions of time will be granted. The **Commissioner** may also declare the **Contractor** in default for failure to maintain required insurance.

22.4.4 In the event the **Contractor** receives notice, from an insurance company or other person, that any insurance policy required under this Article 22 shall be cancelled or terminated (or has been cancelled or terminated) for any reason, the **Contractor** shall immediately forward a copy of such notice to both the **Commissioner** and the New York City Comptroller, attn: Office of Contract Administration, Municipal Building, One Centre Street, room 1005, New York, New York 10007. Notwithstanding the foregoing, the **Contractor** shall ensure that there is no interruption in any of the insurance coverage required under this Article 22.

22.4.5 Where notice of loss, damage, occurrence, accident, claim or suit is required under an insurance policy maintained in accordance with this Article 22, the **Contractor** shall notify in writing all insurance carriers that issued potentially responsive policies of any such event relating to any operations under this **Contract** (including notice to Commercial General Liability insurance carriers for events relating to the **Contractor**'s own employees) no later than 20 days after such event. For any policy where the **City** is an Additional Insured, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Insured as well as the Named Insured." Such notice shall also contain the following information: the number of the insurance policy, the name of the named insured, the date and location of the damage, occurrence, or accident, and the identity of the persons or things injured, damaged or lost. The **Contractor** shall simultaneously send a copy of such notice to the City of New York c/o Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007.

22.4.6 In the event of any loss, accident, claim, action, or other event that does or can give rise to a claim under any insurance policy required under this Article 22, the **Contractor** shall at all times fully cooperate with the **City** with regard to such potential or actual claim.

22.5 **Subcontractor Insurance:** In the event the **Contractor** requires any **Subcontractor** to procure insurance with regard to any operations under this **Contract** and requires such **Subcontractor** to name the **Contractor** as an **Additional Insured** thereunder, the **Contractor** shall ensure that the **Subcontractor** name the **City**, including its officials and employees, as an **Additional Insured** with coverage at least as broad as the most recent edition of ISO Form CG 20 26.

22.6 Wherever reference is made in Article 7 or this Article 22 to documents to be sent to the **Commissioner** (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth in Schedule A of the General Conditions. In the event no address is set forth in Schedule A, such documents are to be sent to the **Commissioner**'s address as provided elsewhere in this **Contract**.

22.7 Apart from damages or losses covered by insurance provided pursuant to Articles 22.1.2, 22.1.3, or 22.1.5, the **Contractor** waives all rights against the **City**, including its officials and employees, for any damages or losses that are covered under any insurance required under this Article 22 (whether or not such insurance is actually procured or claims are paid thereunder) or any other insurance applicable to the operations of the **Contractor** and/or its employees, agents, or **Subcontractors**.

22.8 In the event the **Contractor** utilizes a self-insurance program to satisfy any of the requirements of this Article 22, the **Contractor** shall ensure that any such self-insurance program provides the **City** with all rights that would be provided by traditional insurance under this Article 22, including but not limited to the defense and indemnification obligations that insurers are required to undertake in liability policies.

22.9 Materiality/Non-Waiver: The **Contractor's** failure to secure policies in complete conformity with this Article 22, or to give an insurance company timely notice of any sort required in this **Contract** or to do anything else required by this Article 22 shall constitute a material breach of this **Contract**. Such breach shall not be waived or otherwise excused by any action or inaction by the **City** at any time.

22.10 Pursuant to General Municipal Law Section 108, this **Contract** shall be void and of no effect unless **Contractor** maintains Workers' Compensation Insurance for the term of this **Contract** to the extent required and in compliance with the New York State Workers' Compensation Law.

22.11 Other Remedies: Insurance coverage provided pursuant to this Article 22 or otherwise shall not relieve the **Contractor** of any liability under this **Contract**, nor shall it preclude the **City** from exercising any rights or taking such other actions available to it under any other provisions of this **Contract** or **Law**.

ARTICLE 23. MONEY RETAINED AGAINST CLAIMS

23.1 If any claim shall be made by any person or entity (including **Other Contractors** with the **City** on this **Project**) against the **City** or against the **Contractor** and the **City** for any of the following:

- (a) An alleged loss, damage, injury, theft or vandalism of any of the kinds referred to in Articles 7 and 12, plus the reasonable costs of defending the **City**, which in the opinion of the **Comptroller** may not be paid by an insurance company (for any reason whatsoever); or
- (b) An infringement of copyrights, patents or use of patented articles, tools, etc., as referred to in Article 57; or
- (c) Damage claimed to have been caused directly or indirectly by the failure of the **Contractor** to perform the **Work** in strict accordance with this **Contract**,

the amount of such claim, or so much thereof as the **Comptroller** may deem necessary, may be withheld by the **Comptroller**, as security against such claim, from any money due hereunder. The **Comptroller**, in his/her discretion, may permit the **Contractor** to substitute other satisfactory security in lieu of the monies so withheld.

23.2 If an action on such claim is timely commenced and the liability of the **City**, or the **Contractor**, or both, shall have been established therein by a final judgment of a court of competent jurisdiction, or if such claim shall have been admitted by the **Contractor** to be valid, the **Comptroller**

shall pay such judgment or admitted claim out of the monies retained by the **Comptroller** under the provisions of this Article 23, and return the balance, if any, without interest, to the **Contractor**.

ARTICLE 24. MAINTENANCE AND GUARANTY

24.1 The **Contractor** shall promptly repair, replace, restore or rebuild, as the **Commissioner** may determine, any finished **Work** in which defects of materials or workmanship may appear or to which damage may occur because of such defects, during the one (1) year period subsequent to the date of **Substantial Completion** (or use and occupancy in accordance with Article 16), except where other periods of maintenance and guaranty are provided for in Schedule A.

24.2 As security for the faithful performance of its obligations hereunder, the **Contractor**, upon filing its requisition for payment on **Substantial Completion**, shall deposit with the **Commissioner** a sum equal to one (1%) percent of the price (or the amount fixed in Schedule A of the General Conditions) in cash or certified check upon a state or national bank and trust company or a check of such bank and trust company signed by a duly authorized officer thereof and drawn to the order of the **Comptroller**, or obligations of the **City**, which the **Comptroller** may approve as of equal value with the sum so required.

24.3 In lieu of the above, the **Contractor** may make such security payment to the **City** by authorizing the **Commissioner** in writing to deduct the amount from the **Substantial Completion** payment which shall be deemed the deposit required above.

24.4 If the **Contractor** has faithfully performed all of its obligations hereunder the **Commissioner** shall so certify to the **Comptroller** within five (5) **Days** after the expiration of one (1) year from the date of **Substantial Completion** and acceptance of the **Work** or within thirty (30) **Days** after the expiration of the guarantee period fixed in the **Specifications**. The security payment shall be repaid to the **Contractor** without interest within thirty (30) **Days** after certification by the **Commissioner** to the **Comptroller** that the **Contractor** has faithfully performed all of its obligations hereunder.

24.5 Notice by the **Commissioner** to the **Contractor** to repair, replace, rebuild or restore such defective or damaged **Work** shall be timely, pursuant to this article, if given not later than ten (10) **Days** subsequent to the expiration of the one (1) year period or other periods provided for herein.

24.6 If the **Contractor** shall fail to repair, replace, rebuild or restore such defective or damaged **Work** promptly after receiving such notice, the **Commissioner** shall have the right to have the **Work** done by others in the same manner as provided for in the completion of a defaulted **Contract**, under Article 51.

24.7 If the security payment so deposited is insufficient to cover the cost of such **Work**, the **Contractor** shall be liable to pay such deficiency on demand by the **Commissioner**.

24.8 The **Engineer's** certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective **Work** when performed by one other than the **Contractor**, shall be binding and conclusive upon the **Contractor** as to the amount thereof.

24.9 The **Contractor** shall obtain all manufacturers' warranties and guaranties of all equipment and materials required by this **Contract** in the name of the **City** and shall deliver same to the **Commissioner**. All of the **City's** rights and title and interest in and to said manufacturers' warranties and guaranties may be assigned by the **City** to any subsequent purchasers of such equipment and materials or lessees of the premises into which the equipment and materials have been installed.

CHAPTER VI
CHANGES, EXTRA WORK, AND DOCUMENTATION OF CLAIM

ARTICLE 25. CHANGES

25.1 Changes may be made to this **Contract** only as duly authorized in writing by the **Commissioner** in accordance with the **Law** and this **Contract**. All such changes, modifications, and amendments will become a part of the **Contract**. **Work** so ordered shall be performed by the **Contractor**.

25.2 **Contract** changes will be made only for **Work** necessary to complete the **Work** included in the original scope of the **Contract** and/or for non-material changes to the scope of the **Contract**. Changes are not permitted for any material alteration in the scope of **Work** in the **Contract**.

25.3 The **Contractor** shall be entitled to a price adjustment for **Extra Work** performed pursuant to a written change order. Adjustments to price shall be computed in one or more of the following ways:

25.3.1 By applicable unit prices specified in the **Contract**; and/or

25.3.2 By agreement of a fixed price; and/or

25.3.3 By time and material records; and/or

25.3.4 In any other manner approved by the **CCPO**.

25.4 All payments for change orders are subject to pre-audit by the **Engineering Audit Officer** and may be post-audited by the **Comptroller** and/or the **Agency**.

ARTICLE 26. METHODS OF PAYMENT FOR OVERRUNS AND EXTRA WORK

26.1 **Overrun of Unit Price Item:** An overrun is any quantity of a unit price item which the **Contractor** is directed to provide which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule.

26.1.1 For any unit price item, the **Contractor** will be paid at the unit price bid for any quantity up to one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule. If during the progress of the **Work**, the actual quantity of any unit price item required to complete the **Work** approaches the estimated quantity for that item, and for any reason it appears that the actual quantity of any unit price item necessary to complete the **Work** will exceed the estimated quantity for that item by twenty-five (25%) percent, the **Contractor** shall immediately notify the **Engineer** of such anticipated overrun. The **Contractor** shall not be compensated for any quantity of a unit price item provided which is in excess of one hundred twenty-five (125%) percent of the estimated quantity for that item set forth in the bid schedule without written authorization from the **Engineer**.

26.1.2 If the actual quantity of any unit price item necessary to complete the **Work** will exceed one hundred twenty five (125%) percent of the estimated quantity for that item set forth in the bid schedule, the **City** reserves the right and the **Contractor** agrees to negotiate a new unit price for such item. In no event shall such negotiated new unit price exceed the unit bid price. If the **City** and **Contractor** cannot agree on a new unit price, then the **City** shall order the **Contractor** and the **Contractor** agrees to provide additional quantities of the

item on the basis of time and material records for the actual and reasonable cost as determined under Article 26.2, but in no event at a unit price exceeding the unit price bid.

26.2 **Extra Work:** For **Extra Work** where payment is by agreement on a fixed price in accordance with Article 25.3.2, the price to be paid for such **Extra Work** shall be based on the fair and reasonable estimated cost of the items set forth below. For **Extra Work** where payment is based on time and material records in accordance with Article 25.3.3, the price to be paid for such **Extra Work** shall be the actual and reasonable cost of the items set forth below, calculated in accordance with the formula specified therein, if any.

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

26.2.2 Necessary direct labor, including payroll taxes (subject to statutory wage caps) and supplemental benefits; plus

26.2.3 Sales and personal property taxes, if any, required to be paid on materials not incorporated into such **Extra Work**; plus

26.2.4 Reasonable rental value of **Contractor**-owned (or **Subcontractor**-owned, as applicable), necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per operating hour: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. Reasonable rental value is defined as the lower of either seventy-five percent of the monthly prorated rental rates established in "The AED Green Book, Rental Rates and Specifications for Construction Equipment" published by Equipment Watch (the "Green Book"), or seventy-five percent of the monthly prorated rental rates established in the "Rental Rate Blue Book for Construction Equipment" published by Equipment Watch (the "Blue Book") (the applicable Blue Book rate being for rental only without the addition of any operational costs listed in the Blue Book). The reasonable rental value is deemed to be inclusive of all operating costs except for fuel/energy consumption and equipment operator's wages/costs. For multiple shift utilization, reimbursement shall be calculated as follows: first shift shall be seventy-five (75%) percent of such rental rates; second shift shall be sixty (60%) percent of the first shift rate; and third shift shall be forty (40%) percent of the first shift rate. Equipment on standby shall be reimbursed at one-third (1/3) the prorated monthly rental rate. **Contractor**-owned (or **Subcontractor**-owned, as applicable) equipment includes equipment from rental companies affiliated with or controlled by the **Contractor** (or **Subcontractor**, as applicable), as determined by the **Commissioner**. In establishing cost reimbursement for non-operating **Contractor**-owned (or **Subcontractor**-owned, as applicable) equipment (scaffolding, sheeting systems, road plates, etc.), the **City** may restrict reimbursement to a purchase-salvage/life cycle basis if less than the computed rental costs; plus

26.2.5 Necessary installation and dismantling of such plant and equipment, including transportation to and from the **Site**, if any, provided that, in the case of non-**Contractor**-owned (or non-**Subcontractor**-owned, as applicable) equipment rented from a third party, the cost of installation and dismantling are not allowable if such costs are included in the rental rate; plus

26.2.6 Necessary fees charged by governmental entities; plus

26.2.7 Necessary construction-related service fees charged by non-governmental entities, such as landfill tipping fees; plus

26.2.8 Reasonable rental costs of non-**Contractor**-owned (or non-**Subcontractor**-owned, as applicable) necessary plant and equipment other than **Small Tools**, plus fuel/energy costs. Except for fuel costs for pick-up trucks which shall be reimbursed based on a consumption of five (5) gallons per shift, fuel costs shall be reimbursed based on actual costs or, in the absence of auditable documentation, the following fuel consumption formula per hour of operation: $(.035) \times (\text{HP rating}) \times (\text{Fuel cost/gallon})$. In lieu of renting, the **City** reserves the right to direct the purchase of non-operating equipment (scaffolding, sheeting systems, road plates, etc.), with payment on a purchase-salvage/life cycle basis, if less than the projected rental costs; plus

26.2.9 Workers' Compensation Insurance, and any insurance coverage expressly required by the **City** for the performance of the **Extra Work** which is different than the types of insurance required by Article 22 and Schedule A of the General Conditions. The cost of Workers' Compensation Insurance is subject to applicable payroll limitation caps and shall be based upon the carrier's Manual Rate for such insurance derived from the applicable class Loss Cost ("LC") and carrier's Lost Cost Multiplier ("LCM") approved by the New York State Department of Financial Services, and with the exception of experience rating, rate modifiers as promulgated by the New York Compensation Insurance Rating Board ("NYCIRB"); plus

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

26.2.11 Twelve percent (12%) percent of the total of items in Articles 26.2.1 through 26.2.5 as compensation for overhead, except that no percentage for overhead will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes. Overhead shall include without limitation, all costs and expenses in connection with administration, management superintendence, small tools, and insurance required by Schedule A of the General Conditions other than Workers' Compensation Insurance; plus

26.2.12 Ten (10%) percent of the total of items in Articles 26.2.1 through 26.2.5, plus the items in Article 26.2.11, as compensation for profit, except that no percentage for profit will be allowed on **Payroll Taxes** or on the premium portion of overtime pay or on sales and personal property taxes; plus

26.2.13 Five (5%) percent of the total of items in Articles 26.2.6 through 26.2.10 as compensation for overhead and profit.

26.3 Where the **Extra Work** is performed in whole or in part by other than the **Contractor's** own forces pursuant to Article 26.2, the **Contractor** shall be paid, subject to pre-audit by the **Engineering Audit Officer**, the cost of such **Work** computed in accordance with Article 26.2 above, plus an additional allowance of five (5%) percent to cover the **Contractor's** overhead and profit.

26.4 Where a change is ordered, involving both **Extra Work** and omitted or reduced **Contract Work**, the **Contract** price shall be adjusted, subject to pre-audit by the **EAO**, in an amount based on the difference between the cost of such **Extra Work** and of the omitted or reduced **Work**.

26.5 Where the **Contractor** and the **Commissioner** can agree upon a fixed price for **Extra Work** in accordance with Article 25.3.2 or another method of payment for **Extra Work** in accordance with Article

25.3.4, or for **Extra Work** ordered in connection with omitted **Work**, such method, subject to pre-audit by the **EAO**, may, at the option of the **Commissioner**, be substituted for the cost plus a percentage method provided in Article 26.2; provided, however, that if the **Extra Work** is performed by a **Subcontractor**, the **Contractor** shall not be entitled to receive more than an additional allowance of five (5%) percent for overhead and profit over the cost of such **Subcontractor's Work** as computed in accordance with Article 26.2.

ARTICLE 27. RESOLUTION OF DISPUTES

27.1 All disputes between the **City** and the **Contractor** of the kind delineated in this Article 27.1 that arise under, or by virtue of, this **Contract** shall be finally resolved in accordance with the provisions of this Article 27 and the **PPB Rules**. This procedure for resolving all disputes of the kind delineated herein shall be the exclusive means of resolving any such disputes.

27.1.1 This Article 27 shall not apply to disputes concerning matters dealt with in other sections of the **PPB Rules**, or to disputes involving patents, copyrights, trademarks, or trade secrets (as interpreted by the courts of New York State) relating to proprietary rights in computer software.

27.1.2 This Article 27 shall apply only to disputes about the scope of **Work** delineated by the **Contract**, the interpretation of **Contract** documents, the amount to be paid for **Extra Work** or disputed work performed in connection with the **Contract**, the conformity of the **Contractor's Work** to the **Contract**, and the acceptability and quality of the **Contractor's Work**; such disputes arise when the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** makes a determination with which the **Contractor** disagrees.

27.2 All determinations required by this Article 27 shall be made in writing clearly stated, with a reasoned explanation for the determination based on the information and evidence presented to the party making the determination. Failure to make such determination within the time required by this Article 27 shall be deemed a non-determination without prejudice that will allow application to the next level.

27.3 During such time as any dispute is being presented, heard, and considered pursuant to this Article 27, the **Contract** terms shall remain in force and the **Contractor** shall continue to perform **Work** as directed by the **ACCO** or the **Engineer**. Failure of the **Contractor** to continue **Work** as directed shall constitute a waiver by the **Contractor** of its claim.

27.4 Presentation of Disputes to **Commissioner**.

Notice of Dispute and Agency Response. The **Contractor** shall present its dispute in writing ("Notice of Dispute") to the **Commissioner** within thirty (30) Days of receiving written notice of the determination or action that is the subject of the dispute. This notice requirement shall not be read to replace any other notice requirements contained in the **Contract**. The Notice of Dispute shall include all the facts, evidence, documents, or other basis upon which the **Contractor** relies in support of its position, as well as a detailed computation demonstrating how any amount of money claimed by the **Contractor** in the dispute was arrived at. Within thirty (30) Days after receipt of the detailed written submission comprising the complete Notice of Dispute, the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** shall submit to the **Commissioner** all materials he or she deems pertinent to the dispute. Following initial submissions to the **Commissioner**, either party may demand of the other the production of any document or other material the demanding party believes may be relevant to the dispute. The requested party shall produce all relevant materials that are not otherwise

protected by a legal privilege recognized by the courts of New York State. Any question of relevancy shall be determined by the **Commissioner** whose decision shall be final. Willful failure of the **Contractor** to produce any requested material whose relevancy the **Contractor** has not disputed, or whose relevancy has been affirmatively determined, shall constitute a waiver by the **Contractor** of its claim.

27.4.1 **Commissioner Inquiry.** The **Commissioner** shall examine the material and may, in his or her discretion, convene an informal conference with the **Contractor**, the **ACCO**, and the **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner** to resolve the issue by mutual consent prior to reaching a determination. The **Commissioner** may seek such technical or other expertise as he or she shall deem appropriate, including the use of neutral mediators, and require any such additional material from either or both parties as he or she deems fit. The **Commissioner's** ability to render, and the effect of, a decision hereunder shall not be impaired by any negotiations in connection with the dispute presented, whether or not the **Commissioner** participated therein. The **Commissioner** may or, at the request of any party to the dispute, shall compel the participation of any **Other Contractor** with a contract related to the **Work** of this **Contract**, and that **Contractor** shall be bound by the decision of the **Commissioner**. Any **Other Contractor** thus brought into the dispute resolution proceeding shall have the same rights and obligations under this Article 27 as the **Contractor** initiating the dispute.

27.4.2 **Commissioner Determination.** Within thirty (30) **Days** after the receipt of all materials and information, or such longer time as may be agreed to by the parties, the **Commissioner** shall make his or her determination and shall deliver or send a copy of such determination to the **Contractor**, the **ACCO**, and **Engineer, Resident Engineer, Engineering Audit Officer**, or other designee of the **Commissioner**, as applicable, together with a statement concerning how the decision may be appealed.

27.4.3 **Finality of Commissioner's Decision.** The **Commissioner's** decision shall be final and binding on all parties, unless presented to the Contract Dispute Resolution Board pursuant to this Article 27. The **City** may not take a petition to the Contract Dispute Resolution Board. However, should the **Contractor** take such a petition, the **City** may seek, and the Contract Dispute Resolution Board may render, a determination less favorable to the **Contractor** and more favorable to the **City** than the decision of the **Commissioner**.

27.5 **Presentation of Dispute to the Comptroller.** Before any dispute may be brought by the **Contractor** to the Contract Dispute Resolution Board, the **Contractor** must first present its claim to the **Comptroller** for his or her review, investigation, and possible adjustment.

27.5.1 **Time, Form, and Content of Notice.** Within thirty (30) **Days** of its receipt of a decision by the **Commissioner**, the **Contractor** shall submit to the **Comptroller** and to the **Commissioner** a Notice of Claim regarding its dispute with the **Agency**. The Notice of Claim shall consist of (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written decision of the **Commissioner**; and (iii) a copy of all materials submitted by the **Contractor** to the **Agency**, including the Notice of Dispute. The **Contractor** may not present to the **Comptroller** any material not presented to the **Commissioner**, except at the request of the **Comptroller**.

27.5.2 **Response.** Within thirty (30) **Days** of receipt of the Notice of Claim, the **Agency** shall make available to the **Comptroller** a copy of all material submitted by the **Agency** to the **Commissioner** in connection with the dispute. The **Agency** may not present to the

Comptroller any material not presented to the **Commissioner** except at the request of the **Comptroller**.

27.5.3 **Comptroller Investigation.** The **Comptroller** may investigate the claim in dispute and, in the course of such investigation, may exercise all powers provided in Sections 7-201 and 7-203 of the Administrative Code. In addition, the **Comptroller** may demand of either party, and such party shall provide, whatever additional material the **Comptroller** deems pertinent to the claim, including original business records of the **Contractor**. Willful failure of the **Contractor** to produce within fifteen (15) **Days** any material requested by the **Comptroller** shall constitute a waiver by the **Contractor** of its claim. The **Comptroller** may also schedule an informal conference to be attended by the **Contractor**, **Agency** representatives, and any other personnel desired by the **Comptroller**.

27.5.4 **Opportunity of Comptroller to Compromise or Adjust Claim.** The **Comptroller** shall have forty-five (45) **Days** from his or her receipt of all materials referred to in Article 27.5.3 to investigate the disputed claim. The period for investigation and compromise may be further extended by agreement between the **Contractor** and the **Comptroller**, to a maximum of ninety (90) **Days** from the **Comptroller's** receipt of all materials. The **Contractor** may not present its petition to the Contract Dispute Resolution Board until the period for investigation and compromise delineated in this Article 27.5.4 has expired. In compromising or adjusting any claim hereunder, the **Comptroller** may not revise or disregard the terms of the **Contract** between the parties.

27.6 **Contract Dispute Resolution Board.** There shall be a Contract Dispute Resolution Board composed of:

27.6.1 The chief administrative law judge of the Office of Administrative Trials and Hearings (OATH) or his/her designated OATH administrative law judge, who shall act as chairperson, and may adopt operational procedures and issue such orders consistent with this Article 27 as may be necessary in the execution of the Contract Dispute Resolution Board's functions, including, but not limited to, granting extensions of time to present or respond to submissions;

27.6.2 The **CCPO** or his/her designee; any designee shall have the requisite background to consider and resolve the merits of the dispute and shall not have participated personally and substantially in the particular matter that is the subject of the dispute or report to anyone who so participated; and

27.6.3 A person with appropriate expertise who is not an employee of the **City**. This person shall be selected by the presiding administrative law judge from a prequalified panel of individuals, established and administered by OATH with appropriate background to act as decision-makers in a dispute. Such individual may not have a contract or dispute with the **City** or be an officer or employee of any company or organization that does, or regularly represents persons, companies, or organizations having disputes with the **City**.

27.7 **Petition to the Contract Dispute Resolution Board.** In the event the claim has not been settled or adjusted by the **Comptroller** within the period provided in this Article 27, the **Contractor**, within thirty (30) **Days** thereafter, may petition the Contract Dispute Resolution Board to review the **Commissioner's** determination.

27.7.1 **Form and Content of Petition by Contractor.** The **Contractor** shall present its dispute to the Contract Dispute Resolution Board in the form of a petition, which shall

include (i) a brief written statement of the substance of the dispute, the amount of money, if any, claimed, and the reason(s) the **Contractor** contends the dispute was wrongly decided by the **Commissioner**; (ii) a copy of the written Decision of the **Commissioner**, (iii) copies of all materials submitted by the **Contractor** to the Agency; (iv) a copy of the written decision of the **Comptroller**, if any, and (v) copies of all correspondence with, or written material submitted by the **Contractor**, to the **Comptroller**. The **Contractor** shall concurrently submit four (4) complete sets of the Petition: one set to the City Corporation Counsel (Attn: Commercial and Real Estate Litigation Division) and three (3) sets to the Contract Dispute Resolution Board at OATH's offices with proof of service on the City Corporation Counsel. In addition, the **Contractor** shall submit a copy of the written statement of the substance of the dispute, cited in (i) above, to both the **Commissioner** and the **Comptroller**.

27.7.2 **Agency Response.** Within thirty (30) **Days** of its receipt of the Petition by the City Corporation Counsel, the **Agency** shall respond to the brief written statement of the **Contractor** and make available to the Contract Dispute Resolution Board all material it submitted to the **Commissioner** and **Comptroller**. Three (3) complete copies of the **Agency** response shall be provided to the Contract Dispute Resolution Board and one to the **Contractor**. Extensions of time for submittal of the **Agency** response shall be given as necessary upon a showing of good cause or, upon consent of the parties, for an initial period of up to thirty (30) **Days**.

27.7.3 **Further Proceedings.** The Contract Dispute Resolution Board shall permit the **Contractor** to present its case by submission of memoranda, briefs, and oral argument. The Contract Dispute Resolution Board shall also permit the **Agency** to present its case in response to the **Contractor** by submission of memoranda, briefs, and oral argument. If requested by the City Corporation Counsel, the **Comptroller** shall provide reasonable assistance in the preparation of the **Agency's** case. Neither the **Contractor** nor the **Agency** may support its case with any documentation or other material that was not considered by the **Comptroller**, unless requested by the Contract Dispute Resolution Board. The Contract Dispute Resolution Board, in its discretion, may seek such technical or other expert advice as it shall deem appropriate and may seek, on its own or upon application of a party, any such additional material from any party as it deems fit. The Contract Dispute Resolution Board, in its discretion, may combine more than one dispute between the parties for concurrent resolution.

27.7.4 **Contract Dispute Resolution Board Determination.** Within forty-five (45) **Days** of the conclusion of all written submissions and oral arguments, the Contract Dispute Resolution Board shall render a written decision resolving the dispute. In an unusually complex case, the Contract Dispute Resolution Board may render its decision in a longer period, not to exceed ninety (90) **Days**, and shall so advise the parties at the commencement of this period. The Contract Dispute Resolution Board's decision must be consistent with the terms of the **Contract**. Decisions of the Contract Dispute Resolution Board shall only resolve matters before the Contract Dispute Resolution Board and shall not have precedential effect with respect to matters not before the Contract Dispute Resolution Board.

27.7.5 **Notification of Contract Dispute Resolution Board Decision.** The Contract Dispute Resolution Board shall send a copy of its decision to the **Contractor**, the **ACCO**, the Engineer, the **Comptroller**, the City Corporation Counsel, the CCPO, and the **PPB**. A decision in favor of the **Contractor** shall be subject to the prompt payment provisions of the **PPB Rules**. The Required Payment Date shall be thirty (30) **Days** after the date the parties are formally notified of the Contract Dispute Resolution Board's decision.

27.7.6 Finality of Contract Dispute Resolution Board Decision. The Contract Dispute Resolution

Board's decision shall be final and binding on all parties. Any party may seek review of the Contract Dispute Resolution Board's decision solely in the form of a challenge, filed within four (4) months of the date of the Contract Dispute Resolution Board's decision, in a court of competent jurisdiction of the State of New York, County of New York pursuant to Article 78 of the Civil Practice Law and Rules. Such review by the court shall be limited to the question of whether or not the Contract Dispute Resolution Board's decision was made in violation of lawful procedure, was affected by an error of Law, or was arbitrary and capricious or an abuse of discretion. No evidence or information shall be introduced or relied upon in such proceeding that was not presented to the Contract Dispute Resolution Board in accordance with this Article 27.

27.8 Any termination, cancellation, or alleged breach of the Contract prior to or during the pendency of any proceedings pursuant to this Article 27 shall not affect or impair the ability of the Commissioner or Contract Dispute Resolution Board to make a binding and final decision pursuant to this Article 27.

ARTICLE 28. RECORD KEEPING FOR EXTRA OR DISPUTED WORK OR WORK ON A TIME & MATERIALS BASIS

28.1 While the Contractor or any of its Subcontractors is performing Work on a time and material basis or Extra Work on a time and material basis ordered by the Commissioner under Article 25, or where the Contractor believes that it or any of its Subcontractors is performing Extra Work but a final determination by Agency has not been made, or the Contractor or any of its Subcontractors is performing disputed Work (whether on or off the Site), or complying with a determination or order under protest in accordance with Articles 11, 27, and 30, in each such case the Contractor shall furnish the Resident Engineer daily with three (3) copies of written statements signed by the Contractor's representative at the Site showing:

28.1.1 The name, trade, and number of each worker employed on such Work or engaged in complying with such determination or order, the number of hours employed, and the character of the Work each is doing; and

28.1.2 The nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such Work or compliance with such determination or order, and from whom purchased or rented.

28.2 A copy of such statement will be countersigned by the Resident Engineer, noting thereon any items not agreed to or questioned, and will be returned to the Contractor within two (2) Days after submission.

28.3 The Contractor and its Subcontractors, when required by the Commissioner, or the Comptroller, shall also produce for inspection, at the office of the Contractor or Subcontractor, any and all of its books, bid documents, financial statements, vouchers, records, daily job diaries and reports, and cancelled checks, and any other documents relating to showing the nature and quantity of the labor, materials, plant and equipment actually used in the performance of such Work, or in complying with such determination or order, and the amounts expended therefor, and shall permit the Commissioner and the Comptroller to make such extracts therefrom, or copies thereof, as they or either of them may desire.

28.4 In connection with the examination provided for herein, the Commissioner, upon demand therefor, will produce for inspection by the Contractor such records as the Agency may have with

respect to such **Extra Work** or disputed **Work** performed under protest pursuant to order of the **Commissioner**, except those records and reports which may have been prepared for the purpose of determining the accuracy and validity of the **Contractor's** claim.

28.5 Failure to comply strictly with these requirements shall constitute a waiver of any claim for extra compensation or damages on account of the performance of such **Work** or compliance with such determination or order.

ARTICLE 29. OMITTED WORK

29.1 If any **Contract Work** in a lump sum **Contract**, or if any part of a lump sum item in a unit price, lump sum, or percentage-bid **Contract** is omitted by the **Commissioner** pursuant to Article 33, the **Contract** price, subject to audit by the EAO, shall be reduced by a pro rata portion of the lump sum bid amount based upon the percent of **Work** omitted subject to Article 29.4. For the purpose of determining the pro rata portion of the lump sum bid amount, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be the determining factor.

29.2 If the whole of a lump sum item or units of any other item is so omitted by the **Commissioner** in a unit price, lump sum, or percentage-bid **Contract**, then no payment will be made therefor except as provided in Article 29.4.

29.3 For units that have been ordered but are only partially completed, the unit price shall be reduced by a pro rata portion of the unit price bid based upon the percentage of **Work** omitted subject to Article 29.4.

29.4 In the event the **Contractor**, with respect to any omitted **Work**, has purchased any non-cancelable material and/or equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated into the **Work**, the **Contractor** shall be paid for such material and/or equipment in accordance with Article 64.2.1(b); provided, however, such payment is contingent upon the **Contractor's** delivery of such material and/or equipment in acceptable condition to a location designated by the **City**.

29.5 The **Contractor** agrees to make no claim for damages or for loss of overhead and profit with regard to any omitted **Work**.

ARTICLE 30. NOTICE AND DOCUMENTATION OF COSTS AND DAMAGES; PRODUCTION OF FINANCIAL RECORDS

30.1 If the **Contractor** shall claim to be sustaining damages by reason of any act or omission of the **City** or its agents, it shall submit to the **Commissioner** within forty-five (45) **Days** from the time such damages are first incurred, and every thirty (30) **Days** thereafter for as long as such damages are incurred, verified statements of the details and the amounts of such damages, together with documentary evidence of such damages. The **Contractor** may submit any of the above statements within such additional time as may be granted by the **Commissioner** in writing upon written request therefor. Failure of the **Commissioner** to respond in writing to a written request for additional time within thirty (30) **Days** shall be deemed a denial of the request. On failure of the **Contractor** to strictly comply with the foregoing provisions, such claims shall be deemed waived and no right to recover on such claims shall exist. Damages that the **Contractor** may claim in any action or dispute resolution procedure arising under or by reason of this **Contract** shall not be different from or in excess of the statements and documentation made pursuant to this Article 30.

30.2 In addition to the foregoing statements, the **Contractor** shall, upon notice from the **Commissioner**, produce for examination at the **Contractor's** office, by the **Engineer, Architect or Project Manager**, all of its books of account, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**, and submit itself and persons in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.3 In addition to the statements required under Article 28 and this Article 30, the **Contractor** and/or its **Subcontractor** shall, within thirty (30) **Days** upon notice from the **Commissioner** or **Comptroller**, produce for examination at the **Contractor's** and/or **Subcontractor's** office, by a representative of either the **Commissioner** or **Comptroller**, all of its books of account, bid documents, financial statements, accountant workpapers, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books, and cancelled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this **Contract**. Further, the **Contractor** and/or its **Subcontractor** shall submit any person in its employment, for examination under oath by any person designated by the **Commissioner** or **Comptroller** to investigate claims made or disputes against the **City** under this **Contract**. At such examination, a duly authorized representative of the **Contractor** may be present.

30.4 Unless the information and examination required under Article 30.3 is provided by the **Contractor** and/or its **Subcontractor** upon thirty (30) **Days'** notice from the **Commissioner** or **Comptroller**, or upon the **Commissioner's** or **Comptroller's** written authorization to extend the time to comply, the **City** shall be released from all claims arising under, relating to or by reason of this **Contract**, except for sums certified by the **Commissioner** to be due under the provisions of this **Contract**. It is further stipulated and agreed that no person has the power to waive any of the foregoing provisions and that in any action or dispute resolution procedure against the **City** to recover any sum in excess of the sums certified by the **Commissioner** to be due under or by reason of this **Contract**, the **Contractor** must allege in its complaint and prove, at trial or during such dispute resolution procedure, compliance with the provisions of this Article 30.

30.5 In addition, after the commencement of any action or dispute resolution procedure by the **Contractor** arising under or by reason of this **Contract**, the **City** shall have the right to require the **Contractor** to produce for examination under oath, up until the trial of the action or hearing before the Contract Dispute Resolution Board, the books and documents described in Article 30.3 and submit itself and all persons in its employ for examination under oath. If this Article 30 is not complied with as required, then the **Contractor** hereby consents to the dismissal of the action or dispute resolution procedure.

CHAPTER VII
POWERS OF THE RESIDENT ENGINEER,
THE ENGINEER OR ARCHITECT AND THE COMMISSIONER

ARTICLE 31. THE RESIDENT ENGINEER

31.1 The **Resident Engineer** shall have the power to inspect, supervise, and control the performance of the **Work**, subject to review by the **Commissioner**. The **Resident Engineer** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 32. THE ENGINEER OR ARCHITECT OR PROJECT MANAGER

32.1 The **Engineer** or **Architect** or **Project Manager**, in addition to those matters elsewhere herein delegated to the **Engineer** and expressly made subject to his/her determination, direction or approval, shall have the power, subject to review by the **Commissioner**:

32.1.1 To determine the amount, quality, and location of the **Work** to be paid for hereunder; and

32.1.2 To determine all questions in relation to the **Work**, to interpret the **Contract Drawings, Specifications, and Addenda**, and to resolve all patent inconsistencies or ambiguities therein; and

32.1.3 To determine how the **Work** of this **Contract** shall be coordinated with **Work** of **Other Contractors** engaged simultaneously on this **Project**, including the power to suspend any part of the **Work**, but not the whole thereof; and

32.1.4 To make minor changes in the **Work** as he/she deems necessary, provided such changes do not result in a net change in the cost to the **City** or to the **Contractor** of the **Work** to be done under the **Contract**; and

32.1.5 To amplify the **Contract Drawings**, add explanatory information and furnish additional **Specifications** and drawings, consistent with this **Contract**.

32.2 The foregoing enumeration shall not imply any limitation upon the power of the **Engineer** or **Architect** or **Project Manager**, for it is the intent of this **Contract** that all of the **Work** shall generally be subject to his/her determination, direction, and approval, except where the determination, direction or approval of someone other than the **Engineer** or **Architect** or **Project Manager** is expressly called for herein.

32.3 The **Engineer** or **Architect** or **Project Manager** shall not, however, have the power to issue an **Extra Work** order, except as specifically designated in writing by the **Commissioner**.

ARTICLE 33. THE COMMISSIONER

33.1 The **Commissioner**, in addition to those matters elsewhere herein expressly made subject to his/her determination, direction or approval, shall have the power:

33.1.1 To review and make determinations on any and all questions in relation to this **Contract** and its performance; and

33.1.2 To modify or change this **Contract** so as to require the performance of **Extra Work** (subject, however, to the limitations specified in Article 25) or the omission of **Contract Work**; and

33.1.3 To suspend the whole or any part of the **Work** whenever in his/her judgment such suspension is required:

33.1.3(a) In the interest of the **City** generally; or

33.1.3(b) To coordinate the **Work** of the various contractors engaged on this **Project** pursuant to the provisions of Article 12; or

33.1.3(c) To expedite the completion of the entire **Project** even though the completion of this particular **Contract** may thereby be delayed.

ARTICLE 34. NO ESTOPPEL

34.1 Neither the **City** nor any **Agency**, official, agent or employee thereof, shall be bound, precluded or estopped by any determination, decision, approval, order, letter, payment or certificate made or given under or in connection with this **Contract** by the **City**, the **Commissioner**, the **Engineer**, the **Resident Engineer**, or any other official, agent or employee of the **City**, either before or after the final completion and acceptance of the **Work** and payment therefor:

34.1.1 From showing the true and correct classification, amount, quality or character of the **Work** actually done; or that any such determination, decision, order, letter, payment or certificate was untrue, incorrect or improperly made in any particular, or that the **Work**, or any part thereof, does not in fact conform to the requirements of this **Contract**; and

34.1.2 From demanding and recovering from the **Contractor** any overpayment made to it, or such damages as the **City** may sustain by reason of the **Contractor's** failure to perform each and every part of its **Contract**.

CHAPTER VIII LABOR PROVISIONS

ARTICLE 35. EMPLOYEES

35.1 The **Contractor** and its **Subcontractors** shall not employ on the **Work**:

35.1.1 Anyone who is not competent, faithful and skilled in the **Work** for which he/she shall be employed; and whenever the **Commissioner** shall inform the **Contractor**, in writing, that any employee is, in his/her opinion, incompetent, unfaithful or disobedient, that employee shall be discharged from the **Work** forthwith, and shall not again be employed upon it; or

35.1.2 Any labor, materials or means whose employment, or utilization during the course of this **Contract**, may tend to or in any way cause or result in strikes, work stoppages, delays, suspension of **Work** or similar troubles by workers employed by the **Contractor** or its **Subcontractors**, or by any of the trades working in or about the buildings and premises where **Work** is being performed under this **Contract**, or by **Other Contractors** or their **Subcontractors** pursuant to other contracts, or on any other building or premises owned or operated by the **City**, its **Agencies**, departments, boards or authorities. Any violation by the **Contractor** of this requirement may, upon certification of the **Commissioner**, be considered as proper and sufficient cause for declaring the **Contractor** to be in default, and for the **City** to take action against it as set forth in Chapter X of this **Contract**, or such other article of this **Contract** as the **Commissioner** may deem proper; or

35.1.3 In accordance with Section 220.3-e of the Labor Law of the State of New York (hereinafter "Labor Law"), the **Contractor** and its **Subcontractors** shall not employ on the **Work** any apprentice, unless he/she is a registered individual, under a bona fide program

registered with the New York State Department of Labor. The allowable ratio of apprentices to journey-level workers in any craft classification shall not be greater than the ratio permitted to the **Contractor** as to its work force on any job under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the wage rate determined by the **Comptroller** of the **City** for the classification of **Work** actually performed. The **Contractor** or **Subcontractor** will be required to furnish written evidence of the registration of its program and apprentices as well as all the appropriate ratios and wage rates, for the area of the construction prior to using any apprentices on the **Contract Work**.

35.2 If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, all laborers, workers, and mechanics employed in the performance of the **Contract** on the public work site, either by the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by the **Contract**, shall be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least ten (10) hours in duration.

35.3 In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the Administrative Code, respectively,

35.3.1 The **Contractor** shall not take an adverse personnel action with respect to an officer or employee in retaliation for such officer or employee making a report of information concerning conduct which such officer or employee knows or reasonably believes to involve corruption, criminal activity, conflict of interest, gross mismanagement or abuse of authority by any officer or employee relating to this **Contract** to (a) the Commissioner of the Department of Investigation, (b) a member of the New York City Council, the Public Advocate, or the **Comptroller**, or (c) the **CCPO**, **ACCO**, **Agency** head, or **Commissioner**.

35.3.2 If any of the **Contractor's** officers or employees believes that he or she has been the subject of an adverse personnel action in violation of Article 35.3.1, he or she shall be entitled to bring a cause of action against the **Contractor** to recover all relief necessary to make him or her whole. Such relief may include but is not limited to: (a) an injunction to restrain continued retaliation, (b) reinstatement to the position such employee would have had but for the retaliation or to an equivalent position, (c) reinstatement of full fringe benefits and seniority rights, (d) payment of two times back pay, plus interest, and (e) compensation for any special damages sustained as a result of the retaliation, including litigation costs and reasonable attorney's fees.

35.3.3 The **Contractor** shall post a notice provided by the **City** in a prominent and accessible place on any site where work pursuant to the **Contract** is performed that contains information about:

35.3.3(a) how its employees can report to the New York City Department of Investigation allegations of fraud, false claims, criminality or corruption arising out of or in connection with the **Contract**; and

35.3.3(b) the rights and remedies afforded to its employees under Administrative Code sections 7-805 (the New York City False Claims Act) and 12-113 (the Whistleblower Protection Expansion Act) for lawful acts taken in connection with the reporting of allegations of fraud, false claims, criminality or corruption in connection with the **Contract**.

35.3.4 For the purposes of this Article 35.3, "adverse personnel action" includes dismissal, demotion, suspension, disciplinary action, negative performance evaluation, any action resulting in loss of staff, office space, equipment or other benefit, failure to appoint, failure to promote, or any transfer or assignment or failure to transfer or assign against the wishes of the affected officer or employee.

35.3.5 This Article 35.3 is applicable to all of the **Contractor's Subcontractors** having subcontracts with a value in excess of \$100,000; accordingly, the **Contractor** shall include this rider in all subcontracts with a value a value in excess of \$100,000.

35.4 Article 35.3 is not applicable to this **Contract** if it is valued at \$100,000 or less. Articles 35.3.1, 35.3.2, 35.3.4, and 35.3.5 are not applicable to this **Contract** if it was solicited pursuant to a finding of an emergency.

ARTICLE 36. NO DISCRIMINATION

36.1 The **Contractor** specifically agrees, as required by Labor Law Section 220-e, as amended, that:

36.1.1 In the hiring of employees for the performance of **Work** under this **Contract** or any subcontract hereunder, neither the **Contractor**, **Subcontractor**, nor any person acting on behalf of such **Contractor** or **Subcontractor**, shall by reason of race, creed, color or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the **Work** to which the employment relates;

36.1.2 Neither the **Contractor**, **Subcontractor**, nor any person on its behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of **Work** under this **Contract** on account of race, creed, color or national origin;

36.1.3 There may be deducted from the amount payable to the **Contractor** by the **City** under this **Contract** a penalty of fifty (\$50.00) dollars for each person for each **Day** during which such person was discriminated against or intimidated in violation of the provisions of this **Contract**; and

36.1.4 This **Contract** may be cancelled or terminated by the **City** and all moneys due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this Article 36.

36.1.5 This Article 36 covers all construction, alteration and repair of any public building or public work occurring in the State of New York and the manufacture, sale, and distribution of materials, equipment, and supplies to the extent that such operations are performed within the State of New York pursuant to this **Contract**.

36.2 The **Contractor** specifically agrees, as required by Section 6-108 of the Administrative Code, as amended, that:

36.2.1 It shall be unlawful for any person engaged in the construction, alteration or repair of buildings or engaged in the construction or repair of streets or highways pursuant to a **Contract** with the **City** or engaged in the manufacture, sale or distribution of materials, equipment or supplies pursuant to a **Contract** with the **City** to refuse to employ or to refuse to continue in any employment any person on account of the race, color or creed of such person.

36.2.2 It shall be unlawful for any person or any servant, agent or employee of any person, described in Article 36.1.2, to ask, indicate or transmit, orally or in writing, directly or indirectly, the race, color or creed or religious affiliation of any person employed or seeking employment from such person, firm or corporation.

36.2.3 Breach of the foregoing provisions shall be deemed a violation of a material provision of this **Contract**.

36.2.4 Any person, or the employee, manager or owner of or officer of such firm or corporation who shall violate any of the provisions of this Article 36.2 shall, upon conviction thereof, be punished by a fine of not more than one hundred (\$100.00) dollars or by imprisonment for not more than thirty (30) **Days**, or both.

36.3 This **Contract** is subject to the requirements of Executive Order No. 50 (1980) ("E.O. 50"), as revised, and the rules and regulations promulgated thereunder. No contract will be awarded unless and until these requirements have been complied with in their entirety. By signing this **Contract**, the **Contractor** agrees that it:

36.3.1 Will not engage in any unlawful discrimination against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, marital status or sexual orientation with respect to all employment decisions including, but not limited to, recruitment, hiring, upgrading, demotion, downgrading, transfer, training, rates of pay or other forms of compensation, layoff, termination, and all other terms and conditions of employment; and

36.3.2 Will not engage in any unlawful discrimination in the selection of **Subcontractors** on the basis of the owner's race, color, creed, national origin, sex, age, disability, marital status or sexual orientation; and

36.3.3 Will state in all solicitations or advertisements for employees placed by or on behalf of the **Contractor** that all qualified applicants will receive consideration for employment without unlawful discrimination based on race, creed, color, national origin, sex, age, citizens status, disability, marital status, sexual orientation, or that it is an equal employment opportunity employer; and

36.3.4 Will send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or memorandum of understanding, written notification of its equal employment opportunity commitments under E.O. 50 and the rules and regulations promulgated thereunder; and

36.3.5 Will furnish, before the award of the **Contract**, all information and reports, including an employment report, that are required by E.O. 50, the rules and regulations promulgated thereunder, and orders of the **City** Department of Business Services, Division of Labor Services (**DLS**) and will permit access to its books, records, and accounts by the **DLS** for the purposes of investigation to ascertain compliance with such rules, regulations, and orders.

36.4 The **Contractor** understands that in the event of its noncompliance with the nondiscrimination clauses of this **Contract** or with any of such rules, regulations, or orders, such noncompliance shall constitute a material breach of this **Contract** and noncompliance with E.O. 50 and the rules and regulations promulgated thereunder. After a hearing held pursuant to the rules of the **DLS**, the Director of the **DLS** may direct the **Commissioner** to impose any or all of the following sanctions:

36.4.1 Disapproval of the **Contractor**; and/or

36.4.2 Suspension or termination of the **Contract**; and/or

36.4.3 Declaring the **Contractor** in default; and/or

36.4.4 In lieu of any of the foregoing sanctions, the Director of the **DLS** may impose an employment program.

In addition to any actions taken under this **Contract**, failure to comply with E.O. 50 and the rules and regulations promulgated thereunder, in one or more instances, may result in a **City Agency** declaring the **Contractor** to be non-responsible in future procurements. The **Contractor** further agrees that it will refrain from entering into any **Contract** or **Contract** modification subject to E.O. 50 and the rules and regulations promulgated thereunder with a **Subcontractor** who is not in compliance with the requirements of E.O. 50 and the rules and regulations promulgated thereunder.

36.5 The **Contractor** specifically agrees, as required by Section 6-123 of the Administrative Code, that:

36.5.1 The **Contractor** will not engage in any unlawful discriminatory practice in violation of Title 8 of the Administrative Code; and

36.5.2 Any failure to comply with this Article 36.5 may subject the **Contractor** to the remedies set forth in Section 6-123 of the Administrative Code, including, where appropriate, sanctions such as withholding of payment, imposition of an employment program, finding the **Contractor** to be in default, cancellation of the **Contract**, or any other sanction or remedy provided by **Law** or **Contract**.

ARTICLE 37. LABOR LAW REQUIREMENTS

37.1 The **Contractor** shall strictly comply with all applicable provisions of the Labor Law, as amended. Such compliance is a material term of this **Contract**.

37.2 The **Contractor** specifically agrees, as required by Labor Law Sections 220 and 220-d, as amended, that:

37.2.1 Hours of **Work**: No laborer, worker, or mechanic in the employ of the **Contractor**, **Subcontractor** or other person doing or contracting to do the whole or a part of the **Work** contemplated by this **Contract** shall be permitted or required to work more than eight (8) hours in any one (1) **Day**, or more than five (5) **Days** in any one (1) week, except as provided in the Labor Law and in cases of extraordinary emergency including fire, flood, or danger to life or property, or in the case of national emergency when so proclaimed by the President of the United States of America.

37.2.2 In situations in which there are not sufficient laborers, workers, and mechanics who may be employed to carry on expeditiously the **Work** contemplated by this **Contract** as a result of such restrictions upon the number of hours and **Days** of labor, and the immediate commencement or prosecution or completion without undue delay of the **Work** is necessary for the preservation of the **Site** and/or for the protection of the life and limb of the persons using the same, such laborers, workers, and mechanics shall be permitted or required to

work more than eight (8) hours in any one (1) **Day**; or five (5) **Days** in any one (1) week; provided, however, that upon application of any **Contractor**, the **Commissioner** shall have first certified to the Commissioner of Labor of the State of New York (hereinafter "Commissioner of Labor") that such public **Work** is of an important nature and that a delay in carrying it to completion would result in serious disadvantage to the public; and provided, further, that such Commissioner of Labor shall have determined that such an emergency does in fact exist as provided in Labor Law Section 220.2.

37.2.3 Failure of the **Commissioner** to make such a certification to the Commissioner of Labor shall not entitle the **Contractor** to damages for delay or for any cause whatsoever.

37.2.4 Prevailing Rate of Wages: The wages to be paid for a legal day's **Work** to laborers, workers, or mechanics employed upon the **Work** contemplated by this **Contract** or upon any materials to be used thereon shall not be less than the "prevailing rate of wage" as defined in Labor Law Section 220, and as fixed by the **Comptroller** in the attached Schedule of Wage Rates and in updated schedules thereof. The prevailing wage rates and supplemental benefits to be paid are those in effect at the time the **Work** is being performed.

37.2.5 Requests for interpretation or correction in the Information for Bidders includes all requests for clarification of the classification of trades to be employed in the performance of the **Work** under this **Contract**. In the event that a trade not listed in the **Contract** is in fact employed during the performance of this **Contract**, the **Contractor** shall be required to obtain from the **Agency** the prevailing wage rates and supplementary benefits for the trades used and to complete the performance of this **Contract** at the price at which the **Contract** was awarded.

37.2.6 Minimum Wages: Except for employees whose wage is required to be fixed pursuant to Labor Law Section 220, all persons employed by the **Contractor** and any **Subcontractor** in the manufacture or furnishing of the supplies, materials, or equipment, or the furnishing of work, labor, or services, used in the performance of this **Contract**, shall be paid, without subsequent deduction or rebate unless expressly authorized by **Law**, not less than the sum mandated by **Law**.

37.3 Working Conditions: No part of the **Work**, labor or services shall be performed or rendered by the **Contractor** in any plants, factories, buildings or surroundings or under working conditions which are unsanitary or hazardous or dangerous to the health and safety of employees engaged in the performance of this **Contract**. Compliance with the safety, sanitary, and factory inspection **Laws** of the state in which the **Work** is to be performed shall be prima facie evidence of compliance with this Article 37.3.

37.4 Prevailing Wage Enforcement: The **Contractor** agrees to pay for all costs incurred by the **City** in enforcing prevailing wage requirements, including the cost of any investigation conducted by or on behalf of the **Agency** or the **Comptroller**, where the **City** discovers a failure to comply with any of the requirements of this Article 37 by the **Contractor** or its **Subcontractor(s)**. The **Contractor** also agrees that, should it fail or refuse to pay for any such investigation, the **Agency** is hereby authorized to deduct from a **Contractor's** account an amount equal to the cost of such investigation.

37.4.1 The Labor Law Section 220 and Section 220-d, as amended, provide that this **Contract** shall be forfeited and no sum paid for any **Work** done hereunder on a second conviction for willfully paying less than:

37.4.1(a) The stipulated prevailing wage scale as provided in Labor Law section 220, as amended, or

37.4.1(b) The stipulated minimum hourly wage scale as provided in Labor Law section 220-d, as amended.

37.4.2 For any breach or violation of either working conditions (Article 37.3) or minimum wages (Article 37.2.6) provisions, the party responsible therefor shall be liable to the **City** for liquidated damages, which may be withheld from any amounts due on any contracts with the **City** of such party responsible, or may be recovered in actions brought by the **City** Corporation Counsel in the name of the **City**, in addition to damages for any other breach of this **Contract**, for a sum equal to the amount of any underpayment of wages due to any employee engaged in the performance of this **Contract**. In addition, the **Commissioner** shall have the right to cancel contracts and enter into other contracts for the completion of the original contract, with or without public letting, and the original **Contractor** shall be liable for any additional cost. All sums withheld or recovered as deductions, rebates, refunds, or underpayment of wages hereunder, shall be held in a special deposit account and shall be paid without interest, on order of the **Comptroller**, directly to the employees who have been paid less than minimum rates of pay as set forth herein and on whose account such sums were withheld or recovered, provided that no claims by employees for such payments shall be entertained unless made within two (2) years from the date of actual notice to the **Contractor** of the withholding or recovery of such sums by the **City**.

37.4.3 A determination by the **Comptroller** that a **Contractor** and/or its **Subcontractor** willfully violated Labor Law Section 220 will be forwarded to the **City's** five District Attorneys for review.

37.4.4 The **Contractor's** or **Subcontractor's** noncompliance with this Article 37.4 and Labor Law Section 220 may result in an unsatisfactory performance evaluation and the **Comptroller** may also find and determine that the **Contractor** or **Subcontractor** willfully violated the New York Labor Law.

37.4.4(a) An unsatisfactory performance evaluation for noncompliance with this Article 37.4 may result in a determination that the **Contractor** is a non-responsible bidder on subsequent procurements with the **City** and thus a rejection of a future award of a contract with the **City**, as well as any other sanctions provided for by Law.

37.4.4(b) Labor Law Section 220-b, as amended, provides that when two (2) final determinations have been rendered against a **Contractor** or **Subcontractor** within any consecutive six (6) year period determining that such **Contractor** or **Subcontractor** has willfully failed to pay the prevailing rate of wages or to provide supplements in accordance with the Labor Law and this Article 37.4, whether such failures were concurrent or consecutive and whether or not such final determinations concerning separate public works projects are rendered simultaneously, such **Contractor** or **Subcontractor** shall be ineligible to submit a bid on or be awarded any public works contract with the **City** for a period of five (5) years from the second final determination. If the final determination involves the falsification of payroll records or the kickback of wages or supplements, the **Contractor** or **Subcontractor** shall be ineligible to submit a bid on or be awarded any public works contract with the **City** for a period of five (5) years from the first final determination.

37.4.4(c) Labor Law Section 220, as amended, provides that the **Contractor** or **Subcontractor** found to have violated this Article 37.4 may be directed to make payment of wages or supplements including interest found to be due, and the **Contractor** or **Subcontractor** may be directed to make payment of a further sum as

a civil penalty in an amount not exceeding twenty-five (25%) percent of the total amount found to be due.

37.5 The **Contractor** and its **Subcontractors** shall within ten (10) **Days** after mailing of a Notice of Award or written order, post in prominent and conspicuous places in each and every plant, factory, building, and structure where employees of the **Contractor** and its **Subcontractors** engaged in the performance of this **Contract** are employed, notices furnished by the **City**, in relation to prevailing wages and supplements, minimum wages, and other stipulations contained in Sections 220 and 220-h of the Labor Law, and the **Contractor** and its **Subcontractors** shall continue to keep such notices posted in such prominent and conspicuous places until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services required to be furnished or rendered under this **Contract**.

37.6 The **Contractor** shall strictly comply with all of the provisions of Articles 37.6.1 through 37.6.5, and provide for all workers, laborers or mechanics in its employ, the following:

37.6.1 **Notices Posted At Site:** Post, in a location designated by the **City**, schedules of prevailing wages and supplements for this **Project**, a copy of all re-determinations of such schedules for the **Project**, the Workers' Compensation Law Section 51 notice, all other notices required by Law to be posted at the **Site**, the **City** notice that this **Project** is a public works project on which each worker is entitled to receive the prevailing wages and supplements for the occupation at which he or she is working, and all other notices which the **City** directs the **Contractor** to post. The **Contractor** shall provide a surface for such notices which is satisfactory to the **City**. The **Contractor** shall maintain and keep current such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. The **Contractor** shall post such notices before commencing any **Work** on the **Site** and shall maintain such notices until all **Work** on the **Site** is complete; and

37.6.2 **Daily Site Sign-in Sheets:** Maintain daily **Site** sign-in sheets, and require that **Subcontractors** maintain daily **Site** sign-in sheets for its employees, which include blank spaces for an employee's name to be both printed and signed, job title, date started and Social Security number, the time the employee began work and the time the employee left work, until **Final Acceptance** of the supplies, materials, equipment, or **Work**, labor, or services to be furnished or rendered under this **Contract** unless exception is granted by the **Comptroller** upon application by the **Agency**. In the alternative, subject to the approval of the **CCPO**, the **Contractor** and **Subcontractor** may maintain an electronic or biometric sign-in system, which provides the information required by this Article 37.6.2; and

37.6.3 **Individual Employee Information Notices:** Distribute a notice to each worker, laborer or mechanic employed under this **Contract**, in a form provided by the **Agency**, that this **Project** is a public works project on which each worker, laborer or mechanic is entitled to receive the prevailing rate of wages and supplements for the occupation at which he or she is working. If the total cost of the **Work** under this **Contract** is at least two hundred fifty thousand (\$250,000) dollars, such notice shall also include a statement that each worker, laborer or mechanic must be certified prior to performing any **Work** as having successfully completed a course in construction safety and health approved by the United States Department of Labor's Occupational Safety and Health Administration that is at least ten (10) hours in duration. Such notice shall be distributed to each worker before he or she starts performing any **Work** of this **Contract** and with the first paycheck after July first of each year. "Worker, laborer or mechanic" includes employees of the **Contractor** and all **Subcontractors** and all employees of suppliers entering the **Site**. At the time of distribution, the **Contractor** shall have each worker, laborer or mechanic sign a statement, in a form provided by the **Agency**, certifying that the worker has received the notice required by this

Article 37.6.3, which signed statement shall be maintained with the payroll records required by this **Contract**; and

37.6.3(a) The **Contractor** and each **Subcontractor** shall notify each worker, laborer or mechanic employed under this **Contract** in writing of the prevailing rate of wages for their particular job classification. Such notification shall be given to every worker, laborer, and mechanic on their first pay stub and with every pay stub thereafter; and

37.6.4 **Site Laminated Identification Badges:** The **Contractor** shall provide laminated identification badges which include a photograph of the worker's, laborer's or mechanic's face and indicate the worker's, laborer's or mechanic's name, trade, employer's name, and employment starting date (month/day/year). Further, the **Contractor** shall require as a condition of employment on the **Site**, that each and every worker, laborer or mechanic wear the laminated identification badge at all times and that it may be seen by any representative of the **City**. The **Commissioner** may grant a written waiver from the requirement that the laminated identification badge include a photograph if the **Contractor** demonstrates that the identity of an individual wearing a laminated identification badge can be easily verified by another method; and

37.6.5 **Language Other Than English Used On Site:** Provide the **ACCO** notice when three (3) or more employees (worker and/or laborer and/or mechanic) on the **Site**, at any time, speak a language other than English. The **ACCO** will then provide the **Contractor** the notices described in Article 37.6.1 in that language or languages as may be required. The **Contractor** is responsible for all distributions under this Article 37; and

37.6.6 **Provision of Records:** The **Contractor** and **Subcontractor(s)** shall produce within five (5) **Days** on the **Site** of the **Work** and upon a written order of the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, or the **Comptroller**, such records as are required to be kept by this Article 37.6; and

37.6.7 The **Contractor** and **Subcontractor(s)** shall pay employees by check or direct deposit. If this **Contract** is for an amount greater than one million (\$1,000,000) dollars, checks issued by the **Contractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**). For any subcontract for an amount greater than seven hundred fifty thousand (\$750,000) dollars, checks issued by a **Subcontractor** to covered employees shall be generated by a payroll service or automated payroll system (an in-house system may be used if approved by the **Agency**); and

37.6.8 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 37.6.1 through 37.6.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.7 The **Contractor** and its **Subcontractors** shall keep such employment and payroll records as are required by Section 220 of the Labor Law. The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of this Article 37.7 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

37.8 At the time the **Contractor** makes application for each partial payment and for final payment, the **Contractor** shall submit to the **Commissioner** a written payroll certification, in the form provided by this **Contract**, of compliance with the prevailing wage, minimum wage, and other provisions and stipulations required by Labor Law Section 220 and of compliance with the training requirements of

Labor Law Section 220-h set forth in Article 35.2. This certification of compliance shall be a condition precedent to payment and no payment shall be made to the **Contractor** unless and until each such certification shall have been submitted to and received by the **Commissioner**.

37.9 This **Contract** is executed by the **Contractor** with the express warranty and representation that the **Contractor** is not disqualified under the provisions of Section 220 of the Labor Law from the award of the **Contract**.

37.10 Any breach or violation of any of the foregoing shall be deemed a breach or violation of a material provision of this **Contract**, and grounds for cancellation thereof by the **City**.

ARTICLE 38. PAYROLL REPORTS

38.1 The **Contractor** and its **Subcontractor(s)** shall maintain on the **Site** during the performance of the **Work** the original payrolls or transcripts thereof which the **Contractor** and its **Subcontractor(s)** are required to maintain and shall submit such original payrolls or transcripts, subscribed and affirmed by it as true, within thirty (30) **Days** after issuance of its first payroll, and every thirty (30) **Days** thereafter, pursuant to Labor Law Section 220(3-a)(a)(iii). The **Contractor** and **Subcontractor(s)** shall submit such original payrolls or transcripts along with each and every payment requisition. If payment requisitions are not submitted at least once a month, the **Contractor** and its **Subcontractor(s)** shall submit original payrolls and transcripts both along with its payment requisitions and independently of its payment requisitions.

38.2 The **Contractor** shall maintain payrolls or transcripts thereof for six (6) years from the date of completion of the **Work** on this **Contract**. If such payrolls and transcripts are maintained outside of New York City after the completion of the **Work** and their production is required pursuant to this Article 38, the **Contractor** shall produce such records in New York City upon request by the **City**.

38.3 The **Contractor** and **Subcontractor(s)** shall comply with any written order, direction, or request made by the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law Investigator(s)**, or the **Comptroller**, to provide to the requesting party any of the following information and/or records within five (5) **Days** of such written order, direction, or request:

38.3.1 Such original payrolls or transcripts thereof subscribed and affirmed by it as true and the statements signed by each worker pursuant to this Chapter VIII; and/or

38.3.2 Attendance sheets for each **Day** on which any employee of the **Contractor** and/or any of the **Subcontractor(s)** performed **Work** on the **Site**, which attendance sheet shall be in a form acceptable to the **Agency** and shall provide information acceptable to the **Agency** to identify each such employee; and/or

38.3.3 Any other information to satisfy the **Engineer**, the **Commissioner**, the **ACCO**, the **Agency EAO**, the **Agency Labor Law Investigator(s)** or the **Comptroller**, that this Chapter VIII and the Labor Law, as to the hours of employment and prevailing rates of wages and/or supplemental benefits, are being observed.

38.4 The failure of the **Contractor** or **Subcontractor(s)** to comply with the provisions of Articles 38.1 and/or 38.2 may result in the **Commissioner** declaring the **Contractor** in default and/or the withholding of payments otherwise due under the **Contract**.

ARTICLE 39. DUST HAZARDS

39.1 Should a harmful dust hazard be created in performing the **Work** of this **Contract**, for the elimination of which appliances or methods have been approved by the Board of Standards and Appeals of the City of New York, such appliances and methods shall be installed, maintained, and effectively operated during the continuance of such harmful dust hazard. Failure to comply with this provision after notice shall make this **Contract** voidable at the sole discretion of the **City**.

CHAPTER IX PARTIAL AND FINAL PAYMENTS

ARTICLE 40. CONTRACT PRICE

40.1 The **City** shall pay, and the **Contractor** agrees to accept, in full consideration for the **Contractor's** performance of the **Work** subject to the terms and conditions hereof, the lump sum price or unit prices for which this **Contract** was awarded, plus the amount required to be paid for any **Extra Work** ordered by the **Commissioner** under Article 25, less credit for any **Work** omitted pursuant to Article 29.

ARTICLE 41. BID BREAKDOWN ON LUMP SUM

41.1 Within fifteen (15) **Days** after the commencement date specified in the **Notice to Proceed** or **Order to Work**, unless otherwise directed by the **Resident Engineer**, the **Contractor** shall submit to the **Resident Engineer** a breakdown of its bid price, or of lump sums bid for items of the **Contract**, showing the various operations to be performed under the **Contract**, as directed in the progress schedule required under Article 9, and the value of each of such operations, the total of such items to equal the lump sum price bid. Said breakdown must be approved in writing by the **Resident Engineer**.

41.2 No partial payment will be approved until the **Contractor** submits a bid breakdown that is acceptable to the **Resident Engineer**.

41.3 The **Contractor** shall also submit such other information relating to the bid breakdown as directed by the **Resident Engineer**. Thereafter, the breakdown may be used only for checking the **Contractor's** applications for partial payments hereunder, but shall not be binding upon the **City**, the **Commissioner**, or the **Engineer** for any purpose whatsoever.

ARTICLE 42. PARTIAL PAYMENTS

42.1 From time to time as the **Work** progresses satisfactorily, but not more often than once each calendar month (except where the **Commissioner** approves in writing the submission of invoices on a more frequent basis and for invoices relating to **Work** performed pursuant to a change order), the **Contractor** may submit to the **Engineer** a requisition for a partial payment in the prescribed form, which shall contain an estimate of the quantity and the fair value of the **Work** done during the payment period.

42.2 Partial payments may be made for materials, fixtures, and equipment in advance of their actual incorporation in the **Work**, as the **Commissioner** may approve, and upon the terms and conditions set forth in the General Conditions.

42.3 The **Contractor** shall also submit to the **Commissioner** in connection with every application for partial payment a verified statement in the form prescribed by the **Comptroller** setting forth the information required under Labor Law Section 220-a.

42.4 Within thirty (30) **Days** after receipt of a satisfactory payment application, and within sixty (60) **Days** after receipt of a satisfactory payment application in relation to **Work** performed pursuant to a change order, the **Engineer** will prepare and certify, and the **Commissioner** will approve, a voucher for a partial payment in the amount of such approved estimate, less any and all deductions authorized to be made by the **Commissioner** under the terms of this **Contract** or by **Law**.

ARTICLE 43. PROMPT PAYMENT

43.1 The Prompt Payment provisions of the **PPB Rules** in effect at the time of the bid will be applicable to payments made under this **Contract**. The provisions require the payment to the **Contractor** of interest on payments made after the required payment date, except as set forth in the **PPB Rules**.

43.2 The **Contractor** shall submit a proper invoice to receive payment, except where the **Contract** provides that the **Contractor** will be paid at predetermined intervals without having to submit an invoice for each scheduled payment.

43.3 Determination of interest due will be made in accordance with the **PPB Rules**.

43.4 If the **Contractor** is paid interest, the proportionate share(s) of that interest shall be forwarded by the **Contractor** to its **Subcontractor(s)**.

43.5 The **Contractor** shall pay each **Subcontractor** or **Materialman** not later than seven (7) **Days** after receipt of payment out of amounts paid to the **Contractor** by the **City** for **Work** performed by the **Subcontractor** or **Materialman** under this **Contract**.

43.5.1 If **Contractor** fails to make any payment to any **Subcontractor** or **Materialman** within seven (7) **Days** after receipt of payment by the **City** pursuant to this Article 43.5, then the **Contractor** shall pay interest on amounts due to such **Subcontractor** or **Materialman** at the rate of interest in effect on the date such payment is made by the **Contractor** computed in accordance with Section 756-b (1)(b) of the New York General Business Law. Accrual of interest shall commence on the **Day** immediately following the expiration of the seventh **Day** following receipt of payment by the **Contractor** from the **City** and shall end on the date on which payment is made.

43.6 The **Contractor** shall include in each of its subcontracts a provision requiring each **Subcontractor** to make payment to each of its **Subcontractors** or **Materialmen** for **Work** performed under this **Contract** in the same manner and within the same time period set forth above.

ARTICLE 44. SUBSTANTIAL COMPLETION PAYMENT

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

44.1.1 A final verified statement of any pending Article 27 disputes in accordance with the **PPB Rules** and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) setting forth with respect to each

such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay.

44.1.1(a) With respect to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City Corporation Counsel** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 44.1.1(a) is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor** upon acceptance of the **Substantial Completion** payment pursuant to this Article 44, will have waived any such claims.

44.1.2 A **Final Approved Punch List**.

44.1.3 Where required, a request for an extension of time to achieve **Substantial Completion** or final extension of time.

44.2 The **Commissioner** shall issue a voucher calling for payment of any part or all of the balance due for **Work** performed under the **Contract**, including monies retained under Article 21, less any and all deductions authorized to be made by the **Commissioner**, under this **Contract** or by **Law**, and less twice the amount the **Commissioner** considers necessary to ensure the completion of the balance of the **Work** by the **Contractor**. Such a payment shall be considered a partial and not a final payment. No **Substantial Completion** payment shall be made under this Article 44 where the **Contractor** failed to complete the **Work** within the time fixed for such completion in the Schedule A of the General Conditions, or within the time to which completion may have been extended, until an extension or extensions of time for the completion of **Work** have been acted upon pursuant to Article 13.

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

44.4 The **Contractor** acknowledges that nothing contained in this Article 44 is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 45. FINAL PAYMENT

45.1 After completion and **Final Acceptance** of the **Work**, the **Contractor** shall submit all required certificates and documents, together with a requisition for the balance claimed to be due under the **Contract**, less the amount authorized to be retained for maintenance under Article 24. Such submission shall be within 90 days of the date of the **Commissioner's** written determination of **Final Acceptance**, or within such additional time as may be granted by the **Commissioner** in writing. If the **Contractor** fails to submit all required certificates and documents within the time allowed, no payment of the balance claimed shall be made to the **Contractor** and the **Contractor** shall be deemed to have forfeited its right to

payment of any balance claimed. A verified statement similar to that required in connection with applications for partial payments shall also be submitted to the **Commissioner**.

45.2 Amended Verified Statement of Claims: The **Contractor** shall also submit with the final requisition any amendments to the final verified statement of any pending dispute resolution procedures in accordance with the **PPB Rules** and this **Contract** and any and all alleged claims against the **City**, in any way connected with or arising out of this **Contract** (including those as to which details may have been furnished pursuant to Articles 11, 27, 28, and 30) that have occurred subsequent to **Substantial Completion**, setting forth with respect to each such claim the total amount thereof, the various items of labor and materials included therein, and the alleged value of each such item; and if the alleged claim be one for delay, the alleged cause of each such delay, the period or periods of time, giving the dates when the **Contractor** claims the performance of the **Work** or a particular part thereof was delayed, and an itemized statement and breakdown of the amount claimed for each such delay. With reference to each such claim, the **Commissioner**, the **Comptroller** and, in the event of litigation, the **City Corporation Counsel** shall have the same right to inspect, and to make extracts or copies of, the **Contractor's** books, vouchers, records, etc., as is referred to in Articles 11, 27, 28, and 30. Nothing contained in this Article 45.2, is intended to or shall relieve the **Contractor** from the obligation of complying strictly with Articles 11, 27, 28, and 30. The **Contractor** is warned that unless such claims are completely set forth as herein required, the **Contractor**, upon acceptance of the Final Payment pursuant to Article 46, will have waived any such claims.

45.3 Preparation of Final Voucher: Upon determining the balance due hereunder other than on account of claims, the **Engineer** will prepare and certify, for the **Commissioner's** approval, a voucher for final payment in that amount less any and all deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**. In the case of a lump sum **Contract**, the **Commissioner** shall certify the voucher for final payment within thirty (30) **Days** from the date of completion and acceptance of the **Work**, provided all requests for extensions of time have been acted upon.

45.3.1 All prior certificates and vouchers upon which partial payments were made, being merely estimates made to enable the **Contractor** to prosecute the **Work** more advantageously, shall be subject to correction in the final voucher, and the certification of the **Engineer** thereon and the approval of the **Commissioner** thereof, shall be conditions precedent to the right of the **Contractor** to receive any money hereunder. Such final voucher shall be binding and conclusive upon the **Contractor**.

45.3.2 Payment pursuant to such final voucher, less any deductions authorized to be made by the **Commissioner** under this **Contract** or by **Law**, shall constitute the final payment, and shall be made by the **Comptroller** within thirty (30) **Days** after the filing of such voucher in his/her office.

45.4 The **Contractor** acknowledges that nothing contained in this Article 45 is intended to or shall in any way diminish the force and effect of Article 13.

ARTICLE 46. ACCEPTANCE OF FINAL PAYMENT

46.1 The acceptance by the **Contractor**, or by anyone claiming by or through it, of the final payment, whether such payment be made pursuant to any judgment of any court, or otherwise, shall constitute and operate as a release of the **City** from any and all claims of and liability to the **Contractor** for anything heretofore done or furnished for the **Contractor** relating to or arising out of this **Contract** and the **Work** done hereunder, and for any prior act, neglect or default on the part of the **City** or any of its officials, agents or employees, excepting only a claim against the **City** for the amounts deducted or retained in accordance with the terms and provisions of this **Contract** or by **Law**, and excepting any

claims, not otherwise waived, or any pending dispute resolution procedures which are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45.

46.2 The **Contractor** is warned that the execution by it of a release, in connection with the acceptance of the final payment, containing language purporting to reserve claims other than those herein specifically excepted from the operation of this Article 46, or those for amounts deducted by the **Commissioner** from the final requisition or from the final payment as certified by the **Engineer** and approved by the **Commissioner**, shall not be effective to reserve such claims, anything stated to the **Contractor** orally or in writing by any official, agent or employee of the **City** to the contrary notwithstanding.

46.3 Should the **Contractor** refuse to accept the final payment as tendered by the **Comptroller**, it shall constitute a waiver of any right to interest thereon.

46.4 The **Contractor**, however, shall not be barred by this Article 46 from commencing an action for breach of **Contract** to the extent permitted by **Law** and by the terms of the **Contract** for any claims that are contained in the verified statement filed with the **Contractor's** substantial and final requisitions pursuant to Articles 44 and 45 or that arose after submission of the final payment requisition, provided that a detailed and verified statement of claim is served upon the contracting **Agency** and **Comptroller** not later than forty (40) **Days** after the making of such final payment by electronic funds transfer (EFT) or the mailing of such final payment. The statement shall specify the items upon which the claim will be based and any such claim shall be limited to such items.

ARTICLE 47. APPROVAL BY PUBLIC DESIGN COMMISSION

47.1 All works of art, including paintings, mural decorations, stained glass, statues, bas-reliefs, and other sculptures, monuments, fountains, arches, and other structures of a permanent character intended for ornament or commemoration, and every design of the same to be used in the performance of this **Contract**, and the design of all bridges, approaches, buildings, gates, fences, lamps, or structures to be erected, pursuant to the terms of this **Contract**, shall be submitted to the Art Commission, d/b/a the Public Design Commission of the City of New York, and shall be approved by the Public Design Commission prior to the erection or placing in position of the same. The final payment shall not become due or payable under this **Contract** unless and until the Public Design Commission shall certify that the design for the **Work** herein contracted for has been approved by the said Public Design Commission, and that the same has been executed in substantial accordance with the design so approved, pursuant to the provisions of Chapter 37, Section 854 of the **City Charter**, as amended.

CHAPTER X CONTRACTOR'S DEFAULT

ARTICLE 48. COMMISSIONER'S RIGHT TO DECLARE CONTRACTOR IN DEFAULT

48.1 In addition to those instances specifically referred to in other Articles herein, the **Commissioner** shall have the right to declare the **Contractor** in default of this **Contract** if:

48.1.1 The **Contractor** fails to commence **Work** when notified to do so by the **Commissioner**; or
if

48.1.2 The **Contractor** shall abandon the **Work**; or if

48.1.3 The **Contractor** shall refuse to proceed with the **Work** when and as directed by the **Commissioner**; or if

48.1.4 The **Contractor** shall, without just cause, reduce its working force to a number which, if maintained, would be insufficient, in the opinion of the **Commissioner**, to complete the **Work** in accordance with the progress schedule; or if

48.1.5 The **Contractor** shall fail or refuse to increase sufficiently such working force when ordered to do so by the **Commissioner**; or if

48.1.6 The **Contractor** shall sublet, assign, transfer, convert or otherwise dispose of this **Contract** other than as herein specified; or sell or assign a majority interest in the **Contractor**; or if

48.1.7 The **Contractor** fails to secure and maintain all required insurance; or if

48.1.8 A receiver or receivers are appointed to take charge of the **Contractor's** property or affairs; or if

48.1.9 The **Commissioner** shall be of the opinion that the **Contractor** is or has been unnecessarily or unreasonably or willfully delaying the performance and completion of the **Work**, or the award of necessary subcontracts, or the placing of necessary material and equipment orders; or if

48.1.10 The **Commissioner** shall be of the opinion that the **Contractor** is or has been willfully or in bad faith violating any of the provisions of this **Contract**; or if

48.1.11 The **Commissioner** shall be of the opinion that the **Work** cannot be completed within the time herein provided therefor or within the time to which such completion may have been extended; provided, however, that the impossibility of timely completion is, in the **Commissioner's** opinion, attributable to conditions within the **Contractor's** control; or if

48.1.12 The **Work** is not completed within the time herein provided therefor or within the time to which the **Contractor** may be entitled to have such completion extended; or if

48.1.13 Any statement or representation of the **Contractor** in the **Contract** or in any document submitted by the **Contractor** with respect to the **Work**, the **Project**, or the **Contract** (or for purposes of securing the **Contract**) was untrue or incorrect when made; or if

48.1.14 The **Contractor** or any of its officers, directors, partners, five (5%) percent shareholders, principals, or other persons substantially involved in its activities, commits any of the acts or omissions specified as the grounds for debarment in the **PPB** Rules.

48.2 Before the **Commissioner** shall exercise his/her right to declare the **Contractor** in default, the **Commissioner** shall give the **Contractor** an opportunity to be heard, upon not less than two (2) **Days** notice.

ARTICLE 49. EXERCISE OF THE RIGHT TO DECLARE DEFAULT

49.1 The right to declare the **Contractor** in default for any of the grounds specified or referred to in Article 48 shall be exercised by sending the **Contractor** a notice, signed by the **Commissioner**, setting forth the ground or grounds upon which such default is declared (hereinafter referred to as a "Notice of Default").

49.2 The **Commissioner's** determination that the **Contractor** is in default shall be conclusive, final, and binding on the parties and such a finding shall preclude the **Contractor** from commencing a plenary action for any damages relating to the **Contract**. If the **Contractor** protests the determination of the **Commissioner**, the **Contractor** may commence an action in a court of competent jurisdiction of the State of New York under Article 78 of the New York Civil Practice Law and Rules.

ARTICLE 50. QUITTING THE SITE

50.1 Upon receipt of such notice the **Contractor** shall immediately discontinue all further operations under this **Contract** and shall immediately quit the **Site**, leaving untouched all plant, materials, equipment, tools, and supplies then on the **Site**.

ARTICLE 51. COMPLETION OF THE WORK

51.1 The **Commissioner**, after declaring the **Contractor** in default, may then have the **Work** completed by such means and in such manner, by contract with or without public letting, or otherwise, as he/she may deem advisable, utilizing for such purpose such of the **Contractor's** plant, materials, equipment, tools, and supplies remaining on the **Site**, and also such **Subcontractors**, as he/she may deem advisable.

51.2 After such completion, the **Commissioner** shall make a certificate stating the expense incurred in such completion, which shall include the cost of re-letting and also the total amount of liquidated damages (at the rate provided for in the **Contract**) from the date when the **Work** should have been completed by the **Contractor** in accordance with the terms hereof to the date of actual completion of the **Work**. Such certificate shall be binding and conclusive upon the **Contractor**, its sureties, and any person claiming under the **Contractor**, as to the amount thereof.

51.3 The expense of such completion, including any and all related and incidental costs, as so certified by the **Commissioner**, and any liquidated damages assessed against the **Contractor**, shall be charged against and deducted out of monies which are earned by the **Contractor** prior to the date of default. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

ARTICLE 52. PARTIAL DEFAULT

52.1 In case the **Commissioner** shall declare the **Contractor** in default as to a part of the **Work** only, the **Contractor** shall discontinue such part, shall continue performing the remainder of the **Work** in strict conformity with the terms of this **Contract**, and shall in no way hinder or interfere with any **Other**

Contractor(s) or persons whom the **Commissioner** may engage to complete the **Work** as to which the **Contractor** was declared in default.

52.2 The provisions of this Chapter relating to declaring the **Contractor** in default as to the entire **Work** shall be equally applicable to a declaration of partial default, except that the **Commissioner** shall be entitled to utilize for completion of the part of the **Work** as to which the **Contractor** was declared in default only such plant, materials, equipment, tools, and supplies as had been previously used by the **Contractor** on such part.

ARTICLE 53. PERFORMANCE OF UNCOMPLETED WORK

53.1 In completing the whole or any part of the **Work** under the provisions of this Chapter X, the **Commissioner** shall have the power to depart from or change or vary the terms and provisions of this **Contract**, provided, however, that such departure, change or variation is made for the purpose of reducing the time or expense of such completion. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the **Commissioner's** certificate of the cost of completion referred to in Article 51, nor shall it constitute a defense to an action to recover the amount by which such certificate exceeds the amount which would have been payable to the **Contractor** hereunder but for its default.

ARTICLE 54. OTHER REMEDIES

54.1 In addition to the right to declare the **Contractor** in default pursuant to this Chapter X, the **Commissioner** shall have the absolute right, in his/her sole discretion and without a hearing, to complete or cause to be completed in the same manner as described in Articles 51 and 53, any or all unsatisfactory or uncompleted punch list **Work** that remains after the completion date specified in the **Final Approved Punch List**. A written notice of the exercise of this right shall be sent to the **Contractor** who shall immediately quit the **Site** in accordance with the provisions of Article 50.

54.2 The expense of completion permitted under Article 54.1, including any and all related and incidental costs, as so certified by the **Commissioner**, shall be charged against and deducted out of monies which have been earned by the **Contractor** prior to the date of the exercise of the right set forth in Article 54.1; the balance of such monies, if any, subject to the other provisions of this **Contract**, to be paid to the **Contractor** without interest after such completion. Should the expense of such completion, as certified by the **Commissioner**, exceed the total sum which would have been payable under the **Contract** if it had been completed by the **Contractor**, any excess shall be paid by the **Contractor**.

54.3 The previous provisions of this Chapter X shall be in addition to any and all other remedies available under **Law** or in equity.

54.4 The exercise by the **City** of any remedy set forth herein shall not be deemed a waiver by the **City** of any other legal or equitable remedy contained in this **Contract** or provided under **Law**.

CHAPTER XI
MISCELLANEOUS PROVISIONS

ARTICLE 55. CONTRACTOR'S WARRANTIES

55.1 In consideration of, and to induce, the award of this **Contract** to the **Contractor**, the **Contractor** represents and warrants:

55.1.1 That it is financially solvent, sufficiently experienced and competent to perform the **Work**; and

55.1.2 That the facts stated in its bid and the information given by it pursuant to the Information for Bidders is true and correct in all respects; and

55.1.3 That it has read and complied with all requirements set forth in the **Contract**.

ARTICLE 56. CLAIMS AND ACTIONS THEREON

56.1 Any claim, that is not subject to dispute resolution under the **PPB** Rules or this **Contract**, against the **City** for damages for breach of **Contract** shall not be made or asserted in any action, unless the **Contractor** shall have strictly complied with all requirements relating to the giving of notice and of information with respect to such claims, as herein before provided.

56.2 Nor shall any action be instituted or maintained on any such claims unless such action is commenced within six (6) months after **Substantial Completion**; except that:

56.2.1 Any claims arising out of events occurring after **Substantial Completion** and before **Final Acceptance** of the **Work** shall be asserted within six (6) months of **Final Acceptance** of the **Work**;

56.2.2 Any claims for monies deducted, retained or withheld under the provisions of this **Contract** shall be asserted within six (6) months after the date when such monies otherwise become due and payable hereunder; and

56.2.3 If the **Commissioner** exercises his/her right to terminate the **Contract** pursuant to Article 64, any such action shall be commenced within six (6) months of the date the **Commissioner** exercises said right.

ARTICLE 57. INFRINGEMENT

57.1 The **Contractor** shall be solely responsible for and shall defend, indemnify, and hold the **City** harmless from any and all claims (even if the allegations of the lawsuit are without merit) and judgments for damages and from costs and expenses to which the **City** may be subject to or which it may suffer or incur allegedly arising out of or in connection with any infringement by the **Contractor** of any copyright, trade secrets, trademark or patent rights or any other property or personal right of any third party by the **Contractor** and/or its **Subcontractors** in the performance or completion of the **Work**. Insofar as the facts or **Law** relating to any claim would preclude the **City** from being completely indemnified by the **Contractor**, the **City** shall be partially indemnified by the **Contractor** to the fullest extent permitted by **Law**.

ARTICLE 58. NO CLAIM AGAINST OFFICIALS, AGENTS OR EMPLOYEES

58.1 No claim whatsoever shall be made by the **Contractor** against any official, agent or employee of the **City** for, or on account of, anything done or omitted to be done in connection with this **Contract**.

ARTICLE 59. SERVICE OF NOTICES

59.1 The **Contractor** hereby designates the business address, fax number, and email address specified in its bid, as the place where all notices, directions or other communications to the **Contractor** may be delivered, or to which they may be mailed. Any notice, direction, or communication from either party to the other shall be in writing and shall be deemed to have been given when (i) delivered personally; (ii) sent by certified mail, return receipt requested; (iii) delivered by overnight or same day courier service in a properly addressed envelope with confirmation; or (iv) sent by fax or email and, unless receipt of the fax or e-mail is acknowledged by the recipient by fax or e-mail, deposited in a post office box regularly maintained by the United States Postal Service in a properly addressed, postage pre-paid envelope.

59.2 **Contractor's** notice address, email address, or fax number may be changed at any time by an instrument in writing, executed and acknowledged by the **Contractor**, and delivered to the **Commissioner**.

59.3 Nothing herein contained shall, however, be deemed to preclude or render inoperative the service of any notice, direction or other communication upon the **Contractor** personally, or, if the **Contractor** is a corporation, upon any officer thereof.

ARTICLE 60. UNLAWFUL PROVISIONS DEEMED STRICKEN FROM CONTRACT

60.1 If this **Contract** contains any unlawful provision not an essential part of the **Contract** and which shall not appear to have been a controlling or material inducement to the making thereof, the same shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the **Contract** without affecting the binding force of the remainder.

ARTICLE 61. ALL LEGAL PROVISIONS DEEMED INCLUDED

61.1 It is the intent and understanding of the parties to this **Contract** that each and every provision of **Law** required to be inserted in this **Contract** shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is to be deemed to be inserted herein, and if, through mistake or otherwise, any such provision is not inserted, or is not inserted in correct form, then this **Contract** shall forthwith upon the application of either party be amended by such insertion so as to comply strictly with the **Law** and without prejudice to the rights of either party hereunder.

ARTICLE 62. TAX EXEMPTION

62.1 The **City** is exempt from payment of Federal, State, and local taxes, including sales and compensating use taxes of the State of New York and its cities and counties on all tangible personal property sold to the **City** pursuant to the provisions of this **Contract**. These taxes are not to be included in bids. However, this exemption does not apply to tools, machinery, equipment or other property leased by or to the **Contractor**, **Subcontractor** or **Materialman** or to tangible personal property which, even

though it is consumed, is not incorporated into the completed **Work** (consumable supplies) and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**. The **Contractor** and its **Subcontractors** and **Materialmen** shall be responsible for and pay any and all applicable taxes, including sales and compensating use taxes, on such leased tools, machinery, equipment or other property and upon all such consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**.

62.2 The **Contractor** agrees to sell and the **City** agrees to purchase all tangible personal property, other than consumable supplies and other tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work**, that is required, necessary or proper for or incidental to the construction of the **Project** covered by this **Contract**. The sum paid under this **Contract** for such tangible personal property shall be in full payment and consideration for the sale of such tangible personal property.

62.2.1 The **Contractor** agrees to construct the **Project** and to perform all **Work**, labor and services rendered, necessary, proper or incidental thereto for the sum shown in the bid for the performance of such **Work**, labor, and services, and the sum so paid pursuant to this **Contract** for such **Work**, labor, and services, shall be in full consideration for the performance by the **Contractor** of all its duties and obligations under this **Contract** in connection with said **Work**, labor, and services.

62.3 20 NYCRR Section 541.3(d) provides that a **Contractor's** purchases of tangible personal property that is either incorporated into real property owned by a governmental entity or purchased for and sold to a governmental entity are exempt from sales and use tax. The **City** shall not pay sales tax for any such tangible personal property that it purchases from the **Contractor** pursuant to the **Contract**. With respect to such tangible personal property, the **Contractor**, at the request of the **City**, shall furnish to the **City** such bills of sale and other instruments as may be required by the **City**, properly executed, acknowledged and delivered assuring to the **City** title to such tangible personal property, free of liens and/or encumbrances, and the **Contractor** shall mark or otherwise identify all such tangible personal property as the property of the **City**.

62.4 Title to all tangible personal property to be sold by the **Contractor** to the **City** pursuant to the provisions of the **Contract** shall immediately vest in and become the sole property of the **City** upon delivery of such tangible personal property to the **Site**. Notwithstanding such transfer of title, the **Contractor** shall have the full and continuing responsibility to install such tangible personal property in accordance with the provisions of this **Contract**, protect it, maintain it in a proper condition and forthwith repair, replace and make good any damage thereto, theft or disappearance thereof, and furnish additional tangible personal property in place of any that may be lost, stolen or rendered unusable, without cost to the **City**, until such time as the **Work** covered by the **Contract** is fully accepted by the **City**. Such transfer of title shall in no way affect any of the **Contractor's** obligations hereunder. In the event that, after title has passed to the **City**, any of the tangible personal property is rejected as being defective or otherwise unsatisfactory, title to all such tangible personal property shall be deemed to have been transferred back to the **Contractor**.

62.5 The purchase by **Subcontractors** or **Materialmen** of tangible personal property to be sold hereunder shall be a purchase or procurement for resale to the **Contractor** (either directly or through other **Subcontractors**) and therefore not subject to the aforesaid sales and compensating use taxes, provided that the subcontracts and purchase agreements provide for the resale of such tangible personal property and that such subcontracts and purchase agreements are in a form similar to this **Contract** with respect to the separation of the sale of consumable supplies and tangible personal property that the **Contractor** is required to remove from the **Site** during or upon completion of the **Work** from the **Work** and labor, services, and any other matters to be provided, and provided further that the subcontracts and

purchase agreements provide separate prices for tangible personal property and all other services and matters. Such separation shall actually be followed in practice, including the separation of payments for tangible personal property from the payments for other **Work** and labor and other things to be provided.

62.6 The **Contractor** and its **Subcontractors** and **Materialmen** shall furnish a **Contractor Exempt Purchase Certificate** to all persons, firms or corporations from which they purchase tangible personal property for the performance of the **Work** covered by this **Contract**.

62.7 In the event any of the provisions of this Article 62 shall be deemed to be in conflict with any other provisions of this **Contract** or create any ambiguity, then the provisions of this Article 62 shall control.

ARTICLE 63. INVESTIGATION(S) CLAUSE

63.1 The parties to this **Contract** agree to cooperate fully and faithfully with any investigation, audit or inquiry conducted by a United States, a State of New York (State) or a **City** governmental agency or authority that is empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath, or conducted by the Inspector General of a governmental agency that is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit or license that is the subject of the investigation, audit or inquiry.

63.2 If any person who has been advised that his/her statement, and any information from such statement, will not be used against him/her in any subsequent criminal proceeding refuses to testify before a grand jury or other governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath concerning the award of or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision or public authority thereof, or the Port Authority of New York and New Jersey, or any local development corporation within the **City**, or any public benefit corporation organized under the **Laws** of the State of New York, or;

63.3 If any person refuses to testify for a reason other than the assertion of his/her privilege against self incrimination in an investigation, audit or inquiry conducted by a **City** or State governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to take testimony under oath, or by the Inspector General of the governmental agency that is a party in interest in, and is seeking testimony concerning the award of, or performance under any transaction, agreement, lease, permit, contract, or license entered into with the **City**, the State, or any political subdivision thereof or any local development corporation within the **City**, then;

63.4 The **Commissioner** whose **Agency** is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit, or license shall convene a hearing, upon not less than five (5) **Days**' written notice to the parties involved to determine if any penalties should attach for the failure of a person to testify.

63.5 If any non-governmental party to the hearing requests an adjournment, the **Commissioner** who convened the hearing may, upon granting the adjournment, suspend any contract, lease, permit, or license, pending the final determination pursuant to Article 63.7 without the **City** incurring any penalty or damages for delay or otherwise.

63.6 The penalties which may attach after a final determination by the **Commissioner** may include but shall not exceed:

63.6.1 The disqualification for a period not to exceed five (5) years from the date of an adverse determination for any person, or any entity of which such person was a member at the time the testimony was sought, from submitting bids for, or transacting business with, or entering into or obtaining any contract, lease, permit or license with or from the **City**; and/or

63.6.2 The cancellation or termination of any and all such existing **City** contracts, leases, permits or licenses that the refusal to testify concerns and that have not been assigned as permitted under this **Contract**, nor the proceeds of which pledged, to an unaffiliated and unrelated institutional lender for fair value prior to the issuance of the notice scheduling the hearing, without the **City** incurring any penalty or damages on account of such cancellation or termination; monies lawfully due for goods delivered, work done, rentals, or fees accrued prior to the cancellation or termination shall be paid by the **City**.

63.7 The **Commissioner** shall consider and address in reaching his/her determination and in assessing an appropriate penalty the factors in Articles 63.7.1 and 63.7.2. The **Commissioner** may also consider, if relevant and appropriate, the criteria established in Articles 63.7.3 and 63.7.4, in addition to any other information which may be relevant and appropriate:

63.7.1 The party's good faith endeavors or lack thereof to cooperate fully and faithfully with any governmental investigation or audit, including but not limited to the discipline, discharge, or disassociation of any person failing to testify, the production of accurate and complete books and records, and the forthcoming testimony of all other members, agents, assignees or fiduciaries whose testimony is sought.

63.7.2 The relationship of the person who refused to testify to any entity that is a party to the hearing, including but not limited to, whether the person whose testimony is sought has an ownership interest in the entity and/or the degree of authority and responsibility the person has within the entity.

63.7.3 The nexus of the testimony sought to the subject entity and its contracts, leases, permits or licenses with the **City**.

63.7.4 The effect a penalty may have on an unaffiliated and unrelated party or entity that has a significant interest in an entity subject to penalties under Article 63.6, provided that the party or entity has given actual notice to the **Commissioner** upon the acquisition of the interest, or at the hearing called for in Article 63.4, gives notice and proves that such interest was previously acquired. Under either circumstance the party or entity shall present evidence at the hearing demonstrating the potential adverse impact a penalty will have on such person or entity.

63.8 Definitions:

63.8.1 The term "license" or "permit" as used in this Article 63 shall be defined as a license, permit, franchise or concession not granted as a matter of right.

63.8.2 The term "person" as used in this Article 63 shall be defined as any natural person doing business alone or associated with another person or entity as a partner, director, officer, principal or employee.

63.8.3 The term "entity" as used in this Article 63 shall be defined as any firm, partnership, corporation, association, joint venture, or person that receives monies, benefits, licenses, leases, or permits from or through the **City** or otherwise transacts business with the **City**.

63.8.4 The term "member" as used in this Article 63 shall be defined as any person associated with another person or entity as a partner, director, officer, principal or employee.

63.9 In addition to and notwithstanding any other provision of this **Contract**, the **Commissioner** may in his/her sole discretion terminate this **Contract** upon not less than three (3) **Days**' written notice in the event the **Contractor** fails to promptly report in writing to the **Commissioner** of the Department of Investigations ("DOI") of the **City** any solicitation of money, goods, requests for future employment or other benefit or thing of value, by or on behalf of any employee of the **City** or other person, firm, corporation or entity for any purpose which may be related to the procurement or obtaining of this **Contract** by the **Contractor**, or affecting the performance of this **Contract**.

ARTICLE 64. TERMINATION BY THE CITY

64.1 In addition to termination pursuant to any other article of this **Contract**, the **Commissioner** may, at any time, terminate this **Contract** by written notice to the **Contractor**. In the event of termination, the **Contractor** shall, upon receipt of such notice, unless otherwise directed by the **Commissioner**:

64.1.1 Stop **Work** on the date specified in the notice;

64.1.2 Take such action as may be necessary for the protection and preservation of the **City's** materials and property;

64.1.3 Cancel all cancelable orders for material and equipment;

64.1.4 Assign to the **City** and deliver to the **Site** or another location designated by the **Commissioner**, any non-cancelable orders for material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract** and not incorporated in the **Work**;

64.1.5 Take no action which will increase the amounts payable by the **City** under this **Contract**.

64.2 In the event of termination by the **City** pursuant to this Article 64, payment to the **Contractor** shall be in accordance with Articles 64.2.1, 64.2.2 or 64.2.3, to the extent that each respective article applies.

64.2.1 Lump Sum Contracts or Items: On all lump sum **Contracts**, or on lump sum items in a **Contract**, the **City** will pay the **Contractor** the sum of the amounts described in Articles 64.2.1(a) and 64.2.1(b), less all payments previously made pursuant to this **Contract**. On lump sum **Contracts** only, the **City** will also pay the **Contractor** an additional sum as provided in Article 64.2.1(c).

64.2.1(a) For **Work** completed prior to the notice of termination, the **Contractor** shall be paid a pro rata portion of the lump sum bid amount, plus approved change orders, based upon the percent completion of the **Work**, as determined by the **Commissioner**. For the purpose of determining the pro rata portion of the lump sum bid amount to which the **Contractor** is entitled, the bid breakdown submitted in accordance with Article 41 shall be considered, but shall not be dispositive. The **Commissioner's** determination hereunder shall be final, binding, and conclusive.

64.2.1(b) For non-cancelable material and equipment that is not capable of use except in the performance of this **Contract** and has been specifically fabricated for the sole purpose of this **Contract**, but not yet incorporated in the **Work**, the **Contractor** shall be paid the lesser of the following, less salvage value:

64.2.1(b)(i) The Direct Cost, as defined in Article 64.2.4; or

64.2.1(b)(ii) The fair and reasonable value, if less than Direct Cost, of such material and equipment, plus necessary and reasonable delivery costs.

64.2.1(b)(iii) In addition, the **Contractor** shall be paid five (5%) percent of the amount described in Article 64.2.1(b)(i) or Article 64.2.1(b)(ii), whichever applies.

64.2.1(c) Except as otherwise provided in Article 64.2.1(d), on all lump sum **Contracts**, the **Contractor** shall be paid the percentage indicated below applied to the difference between the total lump sum bid amount and the total of all payments made prior to the notice of termination plus all payments allowed pursuant to Articles 64.2.1(a) and 64.2.1(b):

64.2.1(c)(i) Five (5%) percent of the first five million (\$5,000,000) dollars; and

64.2.1(c)(ii) Three (3%) percent of any amount between five million (\$5,000,000) dollars and fifteen million (\$15,000,000) dollars; plus

64.2.1(c)(iii) One (1%) percent of any amount over fifteen million (\$15,000,000) dollars.

64.2.1(d) In the event the **City** terminates a lump sum **Contract** pursuant to this Article 64 within ninety (90) **Days** after registration of the **Contract** with the **Comptroller**, the **Contractor** shall be paid one (1%) percent of the difference between the lump sum bid amount and the total of all payments made pursuant to this Article 64.2.

64.2.2 Unit Price Contracts or Items: On all unit price **Contracts**, or on unit price items in a **Contract**, the **City** will pay the **Contractor** the sum of the amounts described in Articles 64.2.2(a) and 64.2.2(b), less all payments previously made pursuant to this **Contract**:

64.2.2(a) For all completed units, the unit price stated in the **Contract**, and

64.2.2(b) For units that have been ordered but are only partially completed, the **Contractor** will be paid:

64.2.2(b)(i) A pro rata portion of the unit price stated in the **Contract** based upon the percent completion of the unit and

64.2.2(b)(ii) For non-cancelable material and equipment, payment will be made pursuant to Article 64.2.1(b).

64.2.3 Time and Materials Contracts or Items Based on Time and Material Records: On all **Contracts** or items in a **Contract** where payment for the **Work** is based on time and

material records, the **Contractor** shall be paid in accordance with Article 26, less all payments previously made pursuant to this **Contract**.

64.2.4 Direct Costs: Direct Costs as used in this Article 64.2 shall mean:

64.2.4(a) The actual purchase price of material and equipment, plus necessary and reasonable delivery costs,

64.2.4(b) The actual cost of labor involved in construction and installation at the **Site**, and

64.2.4(c) The actual cost of necessary bonds and insurance purchased pursuant to requirements of this **Contract** less any amounts that have been or should be refunded by the **Contractor's** sureties or insurance carriers.

64.2.4(d) Direct Costs shall not include overhead.

64.3 In no event shall any payments under this Article 64 exceed the **Contract** price for such items.

64.4 All payments pursuant to Article 64 shall be in the nature of liquidated damages and shall be accepted by the **Contractor** in full satisfaction of all claims against the **City**.

64.5 The **City** may deduct or set off against any sums due and payable pursuant to this Article 64, any deductions authorized by this **Contract** or by **Law** (including but not limited to liquidated damages) and any claims it may have against the **Contractor**. The **City's** exercise of the right to terminate the **Contract** pursuant to this Article 64 shall not impair or otherwise effect the **City's** right to assert any claims it may have against the **Contractor** in a plenary action.

64.6 Where the **Work** covered by the **Contract** has been substantially completed, as determined in writing by the **Commissioner**, termination of the **Work** shall be handled as an omission of **Work** pursuant to Articles 29 and 33, in which case a change order will be issued to reflect an appropriate reduction in the **Contract** sum, or if the amount is determined after final payment, such amount shall be paid by the **Contractor**.

ARTICLE 65. CHOICE OF LAW, CONSENT TO JURISDICTION AND VENUE

65.1 This **Contract** shall be deemed to be executed in the **City** regardless of the domicile of the **Contractor**, and shall be governed by and construed in accordance with the **Laws** of the State of New York and the **Laws** of the United States, where applicable.

65.2 The parties agree that any and all claims asserted against the **City** arising under this **Contract** or related thereto shall be heard and determined in the courts of the State of New York ("New York State Courts") located in the **City** and County of New York. To effect this **Contract** and intent, the **Contractor** agrees:

65.2.1 If the **City** initiates any action against the **Contractor** in Federal court or in a New York State Court, service of process may be made on the **Contractor** either in person, wherever such **Contractor** may be found, or by registered mail addressed to the **Contractor** at its address as set forth in this **Contract**, or to such other address as the **Contractor** may provide to the **City** in writing; and

65.2.2 With respect to any action between the **City** and the **Contractor** in a New York State Court, the **Contractor** hereby expressly waives and relinquishes any rights it might otherwise have:

65.2.2(a) To move to dismiss on grounds of forum non conveniens;

65.2.2(b) To remove to Federal Court; and

65.2.2(c) To move for a change of venue to a New York State Court outside New York County.

65.2.3 With respect to any action brought by the **City** against the **Contractor** in a Federal Court located in the **City**, the **Contractor** expressly waives and relinquishes any right it might otherwise have to move to transfer the action to a Federal Court outside the **City**.

65.2.4 If the **Contractor** commences any action against the **City** in a court located other than in the **City** and County of New York, upon request of the **City**, the **Contractor** shall either consent to a transfer of the action to a New York State Court of competent jurisdiction located in the **City** and County of New York or, if the Court where the action is initially brought will not or cannot transfer the action, the **Contractor** shall consent to dismiss such action without prejudice and may thereafter reinstate the action in a New York State Court of competent jurisdiction in New York County.

65.3 If any provision(s) of this Article 65 is held unenforceable for any reason, each and all other provision(s) shall nevertheless remain in full force and effect.

ARTICLE 66. PARTICIPATION IN AN INTERNATIONAL BOYCOTT

66.1 The **Contractor** agrees that neither the **Contractor** nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the Federal Export Administration Act of 1979, as amended, or the regulations of the United States Department of Commerce (Commerce Department) promulgated thereunder.

66.2 Upon the final determination by the Commerce Department or any other agency of the United States as to, or conviction of the **Contractor** or a substantially-owned affiliated company thereof for participation in an international boycott in violation of the provisions of the Export Administration Act of 1979, as amended, or the regulations promulgated thereunder, the **Comptroller** may, at his/her option, render forfeit and void this **Contract**.

66.3 The **Contractor** shall comply in all respects, with the provisions of Section 6-114 of the Administrative Code and the rules and regulations issued by the **Comptroller** thereunder.

ARTICLE 67. LOCALLY BASED ENTERPRISE PROGRAM

67.1 This **Contract** is subject to the requirements of Section 6-108.1 of the Administrative Code and regulations promulgated thereunder. No construction contract shall be awarded unless and until these requirements have been complied with in their entirety; however, compliance with this Article 67 is not required if the Agency sets Subcontractor Participation Goals for Minority- and Women-Owned Business Enterprises (M/WBEs).

67.2 Unless specifically waived by the **Commissioner** with the approval of the Division of Economic and Financial Opportunity of the City Department of Business Services, if any portion of the **Contract** is subcontracted, not less than ten (10%) percent of the total dollar amount of the **Contract** shall be awarded to locally based enterprises (LBEs); except that where less than ten (10%) percent of the total dollar amount of the **Contract** is subcontracted, such lesser percentage shall be so awarded.

67.3 The **Contractor** shall not require performance and payment bonds from LBE **Subcontractors**.

67.4 If the **Contractor** has indicated prior to award that no **Work** will be subcontracted, no **Work** shall be subcontracted without the prior approval of the **Commissioner**, which shall be granted only if the **Contractor** makes a good faith effort beginning at least six (6) weeks before the **Work** is to be performed to obtain LBE **Subcontractors** to perform the **Work**.

67.5 If the **Contractor** has not identified sufficient LBE **Subcontractors** prior to award, it shall sign a letter of compliance stating that it complies with Section 6-108.1 of the Administrative Code, recognizes that achieving the LBE requirement is a condition of its **Contract**, and shall submit documentation demonstrating its good faith efforts to obtain LBEs. After award, the **Contractor** shall begin to solicit LBE's to perform subcontracted **Work** at least six (6) weeks before the date such **Work** is to be performed and shall demonstrate that a good faith effort has been made to obtain LBEs on each subcontract until it meets the required percentage.

67.6 Failure of the **Contractor** to comply with the requirements of Section 6-108.1 of the Administrative Code and the regulations promulgated thereunder shall constitute a material breach of this **Contract**. Remedy for such breach may include the imposition of any or all of the following sanctions:

67.6.1 Reducing the **Contractor's** compensation by an amount equal to the dollar value of the percentage of the LBE subcontracting requirement not complied with;

67.6.2 Declaring the **Contractor** in default;

67.6.3 If the **Contractor** is an LBE, de-certifying and declaring the **Contractor** ineligible to participate in the LBE program for a period of up to three (3) years.

ARTICLE 68. ANTITRUST

68.1 The **Contractor** hereby assigns, sells, and transfers to the City all right, title, and interest in and to any claims and causes of action arising under the antitrust **Laws** of New York State or of the United States relating to the particular goods or services purchased or procured by the City under this **Contract**.

ARTICLE 69. MacBRIDE PRINCIPLES PROVISIONS

69.1 Notice To All Prospective **Contractors**:

69.1.1 Local Law No. 34 of 1991 became effective on September 10, 1991 and added Section 6-115.1 of the Administrative Code. The local **Law** provides for certain restrictions on **City Contracts** to express the opposition of the people of the City to employment discrimination practices in Northern Ireland to promote freedom of work-place opportunity.

69.1.2 Pursuant to Section 6-115.1, prospective **Contractors** for **Contracts** to provide goods or services involving an expenditure of an amount greater than ten thousand

(\$10,000.) dollars, or for construction involving an amount greater than fifteen thousand (\$15,000.) dollars, are asked to sign a rider in which they covenant and represent, as a material condition of their **Contract**, that any business operations in Northern Ireland conducted by the **Contractor** and any individual or legal entity in which the **Contractor** holds a ten (10%) percent or greater ownership interest in the **Contractor** will be conducted in accordance with the MacBride Principles of nondiscrimination in employment.

69.1.3 Prospective **Contractors** are not required to agree to these conditions. However, in the case of **Contracts** let by competitive sealed bidding, whenever the lowest responsible bidder has not agreed to stipulate to the conditions set forth in this notice and another bidder who has agreed to stipulate to such conditions has submitted a bid within five (5%) percent of the lowest responsible bid for a **Contract** to supply goods, services or contraction of comparable quality, the **Agency** shall refer such bids to the Mayor, the Speaker or other officials, as appropriate, who may determine, in accordance with applicable **Law**, that it is in the best interest of the **City** that the **Contract** be awarded to other than the lowest responsible pursuant to Section 313(b)(2) of the **City** Charter.

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

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

69.2.1 Have no business operations in Northern Ireland, or

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

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

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

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

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

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

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

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

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

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

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

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

69.4 The **Contractor** agrees that the covenants and representations in Article 69.2 are material conditions to this **Contract**. In the event the **Agency** receives information that the **Contractor** who made the stipulation required by this Article 69 is in violation thereof, the **Agency** shall review such information and give the **Contractor** an opportunity to respond. If the **Agency** finds that a violation has occurred, the **Agency** shall have the right to declare the **Contractor** in default and/or terminate this **Contract** for cause and procure supplies, services or **Work** from another source in the manner the **Agency** deems proper. In the event of such termination, the **Contractor** shall pay to the **Agency**, or the **Agency** in its sole discretion may withhold from any amounts otherwise payable to the **Contractor**, the difference between the **Contract** price for the uncompleted portion of this **Contract** and the cost to the **Agency** of completing performance of this **Contract** either itself or by engaging another **Contractor** or **Contractors**. In the case of a requirement **Contract**, the **Contractor** shall be liable for such difference in price for the entire amount of supplies required by the **Agency** for the uncompleted term of **Contractor's Contract**. In the case of a construction **Contract**, the **Agency** shall also have the right to hold the **Contractor** in partial or total default in accordance with the default provisions of this **Contract**, and/or may seek debarment or suspension of the **Contractor**. The rights and remedies of the **Agency** hereunder shall be in addition to, and not in lieu of, any rights and remedies the **Agency** has pursuant to this **Contract** or by operation of **Law**.

ARTICLE 70. ELECTRONIC FILING/NYC DEVELOPMENT HUB

70.1 The **Contractor** shall electronically file all alteration type-2 and alteration type-3 applications via the New York City Development Hub Web site, except applications for the following types of minor alterations: enlargements, curb cuts, legalizations, fire alarms, builders pavement plans, and jobs filed on Landmark Preservation Commission calendared properties. All such filings must be professionally certified. Information about electronic filing via the New York City Development Hub is available on the City Department of Buildings Web site at www.nyc.gov/buildings.

ARTICLE 71. PROHIBITION OF TROPICAL HARDWOODS

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

ARTICLE 72. CONFLICTS OF INTEREST

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

ARTICLE 73. MERGER CLAUSE

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

ARTICLE 74. STATEMENT OF WORK

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

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: Twenty nine million six hundred eleven thousand dollars Dollars, (\$ 29,611,000.00), this said sum being the amount at which the Contract was awarded to the Contractor at a public letting thereof, based upon the Contractor's bid for the Contract.

ARTICLE 76. ELECTRONIC FUNDS TRANSFER

76.1 In accordance with Section 6-107.1 of the Administrative Code, the Contractor agrees to accept payments under this Contract from the City by electronic funds transfer (EFT). An EFT is any transfer of funds, other than a transaction originated by check, draft or similar paper instrument, which is initiated through an electronic terminal, telephonic instrument or computer or magnetic tape so as to order, instruct or authorize a financial institution to debit or credit an account. Prior to the first payment made under this Contract, the Contractor shall designate one financial institution or other authorized payment agent and shall complete the attached "EFT Vendor Payment Enrollment Form" in order to provide the Commissioner of the City Department of Finance with information necessary for the Contractor to receive electronic funds transfer payments through a designated financial institution or authorized payment agent. The crediting of the amount of a payment to the appropriate account on the books of a financial institution or other authorized payment agent designated by the Contractor shall constitute full satisfaction by the City for the amount of the payment under this Contract. The account information supplied by the Contractor to facilitate the electronic funds transfer shall remain confidential to the fullest extent provided by Law.

76.2 The Commissioner may waive the application of the requirements of this Article 76 to payments on contracts entered into pursuant to Section 315 of the City Charter. In addition, the Commissioner of the Department of Finance and the Comptroller may jointly issue standards pursuant to

which the Agency may waive the requirements of this Article 76 for payments in the following circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications of types of checks; or (iii) in other circumstances as may be necessary in the interest of the City.

ARTICLE 77. RECORDS RETENTION

77.1 The Contractor agrees to retain all books, records, and other documents relevant to this Contract for six years after the final payment or termination of this Contract, whichever is later. City, state, and federal auditors and any other persons duly authorized by the City shall have full access to and the right to examine any such books, records, and other documents during the retention period.

ARTICLE 78. PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT

NOTICE TO ALL PROSPECTIVE CONTRACTORS

ARTICLE I. M/WBE PROGRAM

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

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

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

PART A

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

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

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

2. If Participation Goals have been established for this Contract or Task Orders issued pursuant to this Contract, Contractor agrees or shall agree as a material term of the Contract that Contractor shall be subject to the Participation

Goals, unless the goals are waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

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

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

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

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

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

C. **THE BIDDER/PROPOSER MUST COMPLETE THE SCHEDULE B INCLUDED HEREIN (SCHEDULE B, PART II). A SCHEDULE B SUBMITTED BY THE BIDDER/PROPOSER WHICH DOES NOT INCLUDE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS (SEE SECTION V OF PART II) WILL BE DEEMED TO BE NON-RESPONSIVE, UNLESS A FULL WAIVER OF THE PARTICIPATION GOALS IS GRANTED (SCHEDULE B, PART III). IN THE EVENT THAT THE CITY DETERMINES THAT THE BIDDER/PROPOSER HAS SUBMITTED A SCHEDULE B WHERE THE VENDOR CERTIFICATION AND REQUIRED AFFIRMATIONS ARE COMPLETED BUT OTHER**

ASPECTS OF THE SCHEDULE B ARE NOT COMPLETE, OR CONTAIN A COPY OR COMPUTATION ERROR THAT IS AT ODDS WITH THE VENDOR CERTIFICATION AND AFFIRMATIONS, THE BIDDER/PROPOSER WILL BE NOTIFIED BY THE AGENCY AND WILL BE GIVEN FOUR (4) CALENDAR DAYS FROM RECEIPT OF NOTIFICATION TO CURE THE SPECIFIED DEFICIENCIES AND RETURN A COMPLETED SCHEDULE B TO THE AGENCY. FAILURE TO DO SO WILL RESULT IN A DETERMINATION THAT THE BID/PROPOSAL IS NON-RESPONSIVE. RECEIPT OF NOTIFICATION IS DEFINED AS THE DATE NOTICE IS E-MAILED OR FAXED (IF THE BIDDER/PROPOSER HAS PROVIDED AN E-MAIL ADDRESS OR FAX NUMBER), OR NO LATER THAN FIVE (5) CALENDAR DAYS FROM THE DATE OF MAILING OR UPON DELIVERY, IF DELIVERED.

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

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

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

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

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

10. Pre-award waiver of the **Participation Goals**. (a) A bidder or proposer, or contractor with respect to a Task Order, may seek a pre-award full or partial waiver of the **Participation Goals** in accordance with Section 6-129, which

requests that Agency change one or more **Participation Goals** on the grounds that the **Participation Goals** are unreasonable in light of the availability of certified firms to perform the services required, or by demonstrating that it has legitimate business reasons for proposing a lower level of subcontracting in its M/WBE Utilization Plan.

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

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

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

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

- (i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women's business organizations;
- (ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women's business organizations;
- (iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;
- (iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the M/WBE Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;
- (v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;
- (vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;
- (vii) Timely written requests for assistance made by the Contractor to Agency's M/WBE liaison officer and to DSBS;

- (viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

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

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

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

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

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

PART B: MISCELLANEOUS

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

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

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

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

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

ARTICLE II. ENFORCEMENT

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

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

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

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

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


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

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

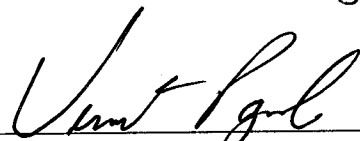
7. The Contractor's record in implementing its **M/WBE** Utilization Plan shall be a factor in the evaluation of its performance. Whenever Agency determines that a Contractor's compliance with an **M/WBE** Utilization Plan has been unsatisfactory, Agency shall, after consultation with the City Chief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

IN WITNESS WHEREOF, the Commissioner, on behalf of the City of New York, and the Contractor, have executed this agreement in quadruplicate, two parts of which are to remain with the Commissioner, another to be filed with the Comptroller of the City, and the fourth to be delivered to the Contractor.

THE CITY OF NEW YORK

By: 
Deputy Commissioner

CONTRACTOR: Gramercy Group Inc.

By: 
(Member of Firm or Officer of Corporation)

Title: President

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

Secretary

(Seal)

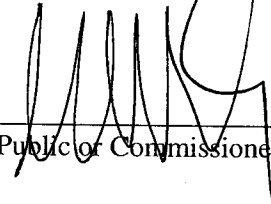
ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Queens ss:

On this 20th day of Jan, 2015, before me personally came Vincor Parlat
to me known, who, being by me duly sworn did depose and say that he resides at 15 Cedar Rd
Forest Hills, NY 11375 that he is the President

of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

VICTORIA AYO-VAUGHAN
Notary Public, State of New York
Registration #01AY5014042
Qualified in Queens County
Commission Expires July 15, 2015



Notary Public or Commissioner of Deeds

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:

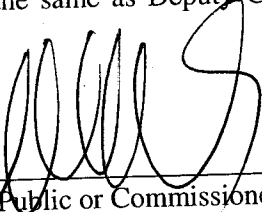
On this _____ day of _____, before me personally appeared _____
to me known, and known to me to be the person described in and who executed the foregoing instrument; and
acknowledged that he executed the same.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT BY COMMISSIONER

State of New York County of Queens ss:

On this 20th day of Jan, 2015, before me personally came Eric Macfarlane
to me known, and known to be the Deputy Commissioner of the Department of Design and Construction of
The City of New York, the person described as such in and who as such executed the foregoing instrument
and he 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

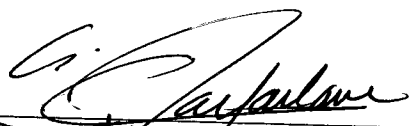
Twenty nine million six hundred
eleven thousand dollars

Dollars (\$ 29,611,000.00)

is chargeable to the fund of the Department of Design and Construction entitled Code

Department of Design and Construction

I hereby certify that the specifications contained herein comply with the terms and conditions of the BUDGET.


Deputy Commissioner

COMPTROLLER'S CERTIFICATE

The City of New York _____

Pursuant to the provisions of Section 6-101 of the Administrative Code of the City of New York, I hereby certify that there remains unapplied and unexpended a balance of the above mentioned fund applicable to this Contract sufficient to pay the estimated expense of executing the same viz:

\$ _____

Comptroller

**MAYOR'S CERTIFICATE OR
CERTIFICATE OF THE DIRECTOR
OF THE BUDGET**

Payment Bond (Pages 98 to 101): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 1)

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____
GRAMERCY GROUP, INC., 3000 BURNS AVENUE, WANTAGH, NY 11793

hereinafter referred to as the "Principal", and _____
ARCH INSURANCE COMPANY, THREE PARKWAY, SUITE 1500, PHILADELPHIA, PA 19102

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
TWENTY NINE MILLION SIX HUNDRED ELEVEN THOUSAND AND 00/100 DOLLARS

(\$ 29,611,000.00) 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
DEMOLITION OF DSNY FACILITIES AT GANSEVOORT PENINSULA. LOCATION: 4 BLOOMFIELD STREET,
MANHATTAN, NY 10004. PROJECT ID: S216-404A DDC PIN: 8502014TR0003C

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

Payment Bond (Pages 98 to 101): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 2)

engaged who perform the work of laborers or mechanics at or in the vicinity of the site 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 98 to 101): 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 12TH day of JANUARY, 2015.

(Seal)

GRAMERCY GROUP, INC. (L.S.)
Principal

By: Vincent Parziale

(Seal)

ARCH INSURANCE COMPANY
Surety

By: Susan Lupski
SUSAN LUPSKI, 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 98 to 101): 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 Nassau ss:

On this 16th day of January, 2015 before me personally came Vincent Parziale to me known, who, being by me duly sworn did depose and say that he resides at 15 Cedar Road,

Belle Terre, NY 11777 that he is the President of the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

JUDITH A. ALLEO
Notary Public, State of New York
No. 01A6080641
Qualified in Suffolk County
Commission Exp. September 16, 2018

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

* * * * *

Affix Acknowledgments and Justification of Sureties

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OF NEW YORK }
COUNTY OF NASSAU } SS

On this JANUARY 12, 2015 before me personally came SUSAN LUPSKI

to me known, who, being by me duly sworn, did depose and say; that he/she resides in
..... NASSAU COUNTY State of ...New York....., that he/she is the Attorney-in-Fact of the
..... ARCH INSURANCE COMPANY the corporation described in which executed the

above instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is
such corporate seal; that it was so affixed by the Board of Directors of said corporation; and that he/she signed
his/her name thereto by like order, and the affiant did further depose and say that the Superintendent of
Insurance of the State of New York, has, pursuant to Section 1111 of the Insurance Law of the State of New
York, issued to ...ARCH INSURANCE COMPANY..... (Surety) his/her certificate of
qualification evidencing the qualification of said Company and its sufficiency under any law of the State of New
York as surety and guarantor, and the propriety of accepting and approving it as such; and that such certificate
has not been revoked.

Florence A. Pagan
.....
Notary Public

FLORENCE A PAGAN
Notary Public, State of New York
No. 01PA6247525
Qualified in Nassau County
Term Expires August 29, 2015

NY acknowledgement

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON BLUE 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. Not valid for Mortgage, Note, Loan, Letter of Credit, Bank Deposit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Camille Mailland, Colette R. Chisholm, Desiree Cardin, George O. Brewster, Gerard S. Macholz, Lee Ferrucci, Nelly Renchiwich, Rita Sagistano, Robert T. Pearson, Susan Lupski, Thomas Bean and Vincent A. Walsh of Uniondale, NY (EACH)

its true and lawful Attorney(s)in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding Ninety Million Dollars (\$90,000,000.00)

This authority does not permit the same obligation to be split into two or more bonds in order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."


This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

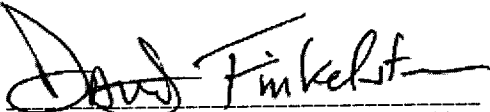
In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 23rd day of October, 2014.

Attested and Certified

Arch Insurance Company


Patrick K. Nails, Secretary

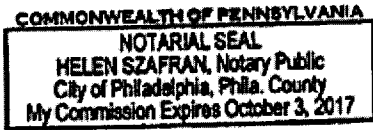


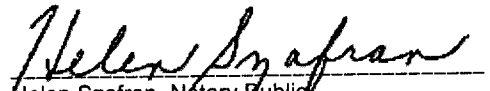

David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Helen Szafran, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

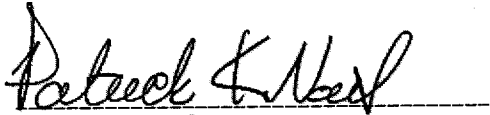



Helen Szafran, Notary Public
My commission expires 10/03/2017

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated October 23, 2014 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this _____ day of JAN 12 2015, 20_____.


Patrick K. Nails, Secretary

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

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102



ARCH INSURANCE COMPANY
STATEMENT OF FINANCIAL CONDITION
December 31, 2013

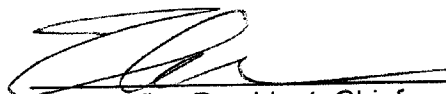
Assets

Cash in Banks	\$ 113,241,149
Bonds owned	1,730,368,149
Stocks	433,238,605
Premiums in course of collection	251,285,768
Accrued interest and other assets	<u>312,730,603</u>
 Total Assets	 <u><u>\$ 2,840,864,274</u></u>


Liabilities

Reserve for losses and adjustment expenses	\$ 1,200,735,312
Reserve for unearned premiums	307,521,736
Ceded reinsurance premiums payable	105,942,093
Amounts withheld or retained by company for account of others	188,907,409
Reserve for taxes, expenses and other liabilities	<u>301,130,327</u>
 Total Liabilities	 2,104,236,877
 Surplus as regards policyholders	 <u>736,627,397</u>
 Total Surplus and Liabilities	 <u><u>\$ 2,840,864,274</u></u>

By:


Senior Vice President, Chief
Financial Officer and Treasurer

Attest:


Senior Vice President,
General Counsel and Secretary

State of New Jersey)

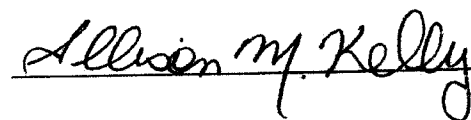
) SS

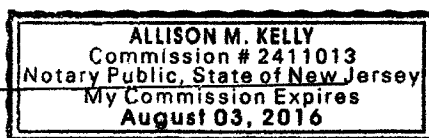
County of Hudson)

Thomas James Ahern, Senior Vice President, Chief Financial Officer and Treasurer and Patrick Kenneth Nails, Senior Vice President, General Counsel and Secretary being duly sworn, of ARCH INSURANCE COMPANY, Missouri; and that the foregoing is a true and correct statement of financial condition of said company, as of December 31, 2013.

Subscribed and sworn to before me, this 10th day of March, 2014

Notary Public





Performance Bond #2 (Pages 94 to 97): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 1)

PERFORMANCE BOND #2

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____

GRAMERCY GROUP INC., 3000 BURNS AVENUE, WANTAGH, NY 11793

hereinafter referred to as the "Principal", and _____

ARCH INSURANCE COMPANY, THREE PARKWAY, SUITE 1500, PHILADELPHIA, PA 19102

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

TWENTY NINE MILLION SIX HUNDRED ELEVEN THOUSAND AND 00/100 DOLLARS

(\$ 29,611,000.00) 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 DEMOLITION OF DSNY FACILITIES AT GANSEVOORT PENINSULA. LOCATION: 4 BLOOMFIELD STREET, MANHATTAN, NY 10004 PROJECT ID: S216-404A DDC PIN: 8502014TR0003C

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

Performance Bond #2 (Pages 94 to 97): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page2)

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 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 94 to 97): 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 those presents to be signed by their proper officers, this 12TH day of JANUARY, 2015.

(Seal)

GRAMERCY GROUP, INC. (L.S.)
Principal

By: Vincent Parziale
Vincent Parziale

(Seal)

ARCH INSURANCE COMPANY
Surety

By: Susan Lupski
SUSAN LUPSKI, ATTORNEY-IN-FACT

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

Bond Premium Rate \$17/M Sliding Scale Rate

Bond Premium Cost \$208,472.00

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

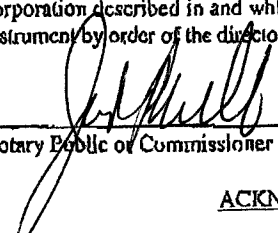
Performance Bond #2 (Pages 94 to 97): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of New York County of Nassau ss:

On this 16th day of Jan., 2015 before me personally came Vincent Parziale to me known, who, being by me duly sworn did depose and say that he/she resides at 15 Cedar Road, Belle Terre, NY 11777; that he/she is the President of the corporation described in and which executed the foregoing instrument; and that he signed his name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.


Notary Public or Commissioner of Deeds

JUDITH A. AIELLO
Notary Public, State of New York
No. 01A16080641
Qualified in Suffolk County
Commission Exp. September 16, 2018

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, 20____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____; that he/she is _____ partner of _____ a limited/general partnership existing under the laws of the State of _____ the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____, 20____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____, and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

* * * * *

Affix Acknowledgments and Justification of Sureties.

ACKNOWLEDGMENT OF SURETY COMPANY

STATE OF NEW YORK }
COUNTY OF NASSAU } SS

On this JANUARY 12, 2015, before me personally came SUSAN LUPSKI

to me known, who, being by me duly sworn, did depose and say; that he/she resides in NASSAU COUNTY, State of New York, that he/she is the Attorney-in-Fact of the ARCH INSURANCE COMPANY the corporation described in which executed the

above instrument; that he/she knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by the Board of Directors of said corporation; and that he/she signed his/her name thereto by like order; and the affiant did further depose and say that the Superintendent of Insurance of the State of New York, has, pursuant to Section 1111 of the Insurance Law of the State of New York, issued to ARCH INSURANCE COMPANY (Surety) his/her certificate of qualification evidencing the qualification of said Company and its sufficiency under any law of the State of New York as surety and guarantor, and the propriety of accepting and approving it as such; and that such certificate has not been revoked.

Florence A. Pagan
Notary Public

FLORENCE A PAGAN
Notary Public, State of New York
No. 01PA6247525
Qualified in Nassau County
Term Expires August 29, 2015

NY acknowledgement

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON BLUE 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. Not valid for Mortgage, Note, Loan, Letter of Credit, Bank Deposit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Camille Maitland, Colette R. Chisholm, Desiree Cardin, George O. Brewster, Gerard S. Macholz, Lee Ferrucci, Nelly Renchiwich, Rita Sagistano, Robert T. Pearson, Susan Lupski, Thomas Bean and Vincent A. Walsh of Uniondale, NY (EACH)

its true and lawful Attorney(s)in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding Ninety Million Dollars (\$90,000,000.00)

This authority does not permit the same obligation to be split into two or more bonds in order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

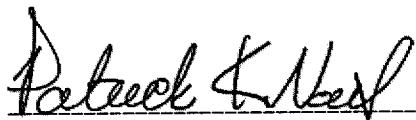
This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

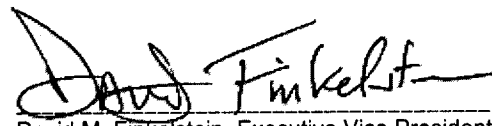
In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 23rd day of October, 2014.

Attested and Certified

Arch Insurance Company


Patrick K. Nails, Secretary

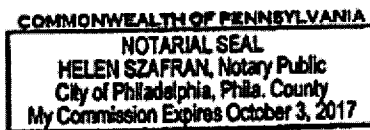


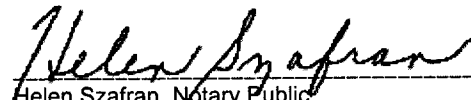

David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Helen Szafran, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

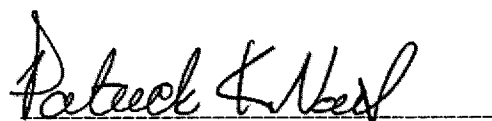



Helen Szafran, Notary Public
My commission expires 10/03/2017

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated October 23, 2014 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this _____ day of JAN 12 2015, 20____.


Patrick K. Nails, Secretary

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

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102



ARCH INSURANCE COMPANY
STATEMENT OF FINANCIAL CONDITION
December 31, 2013


Assets

Cash in Banks	\$ 113,241,149
Bonds owned	1,730,368,149
Stocks	433,238,605
Premiums in course of collection	251,285,768
Accrued interest and other assets	<u>312,730,603</u>
 Total Assets	 <u><u>\$ 2,840,864,274</u></u>

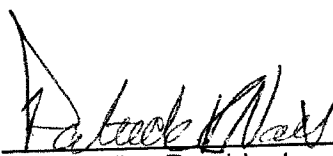
Liabilities

Reserve for losses and adjustment expenses	\$ 1,200,735,312
Reserve for unearned premiums	307,521,736
Ceded reinsurance premiums payable	105,942,093
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 Total Liabilities	 2,104,236,877
 Surplus as regards policyholders	 <u>736,627,397</u>
 Total Surplus and Liabilities	 <u><u>\$ 2,840,864,274</u></u>

By:


Senior Vice President, Chief
Financial Officer and Treasurer

Attest:


Senior Vice President,
General Counsel and Secretary

State of New Jersey)

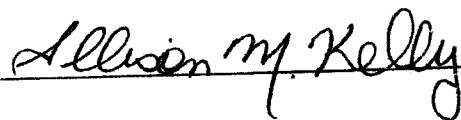
) SS

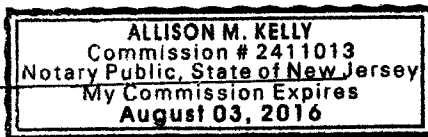
County of Hudson)

Thomas James Ahern, Senior Vice President, Chief Financial Officer and Treasurer and Patrick Kenneth Nails, Senior Vice President, General Counsel and Secretary being duly sworn, of ARCH INSURANCE COMPANY, Missouri; and that the foregoing is a true and correct statement of financial condition of said company, as of December 31, 2013.

Subscribed and sworn to before me, this 10th day of March, 2014

Notary Public





Performance Bond #1 (Pages 90 to 93): Use if the total contract price is \$5 Million Or Less. Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA") for participation in its Bond Guarantee Program.

PERFORMANCE BOND #1 (Page 1)

PERFORMANCE BOND #1

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____

hereinafter referred to as the "Principal", and _____

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

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

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

**Performance Bond #1 (Pages 90 to 93): Use if the total contract price is \$5 Million Or Less.
Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA")
for participation in its Bond Guarantee Program.**

PERFORMANCE BOND #1 (Page 2)

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 good any such default and shall protect the said City of New York against, and pay any and all amounts, damages, cost and judgments which may or shall be recovered against said City or its officers or agents or which the said City of New York may be called upon to pay any person or corporation by reason of any damages arising or growing out of the Principal's default of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

The Surety (Sureties), for value received, hereby stipulates and agrees, upon written notice from the City that the City has determined that the Principal is in default of the Contract, to (1) pay the City the cost to complete the contract as determined by the City in excess of the balance of the Contract held by the City, plus any damages or costs to which the City is entitled, up to the full amount of the above penal sum, (2) fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof, or (3) tender a completion Contractor that is acceptable to the City. The Surety (Sureties) further agrees, at its option, either to notify the City that it elects to pay the city the cost of completion plus any applicable damages and costs under option (1) above, or to commence and diligently perform the Work specified in the Contract, including physical site work, within twenty-five (25) business days after written notice thereof from the City and, if the Surety elects to fully perform and complete the Work, then to complete all Work within the time set forth in the Contract or such other time as agreed to between the City and Surety in accordance with the Contract. If the Surety elects to tender payment pursuant to (1) above, then the Surety shall tender such amount within fifteen (15) business days notification from the City of the cost of completion. The Surety and the City reserve all rights and defenses each may have against the other; provided, however, that the Surety expressly agrees that its reservation of rights shall not provide a basis for non-performance of its obligation to pay the City the cost of completion, to commence and complete all Work as provided herein, or to tender a completion contractor.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, and waivers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to subcontractors shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal. Notwithstanding the above, if the City makes payments to the Principal before the time required by the contract that in the aggregate exceed \$100,000 or 10% of the Contract price, whichever is less, and that have not become earned prior to the Principal being found to be in default, then all payments made to the Principal before the time required by the Contract shall be added to the remaining contract value available to be paid for the completion of the Contract as if such sums had not been paid to the Principal, but shall not provide a basis for non-performance of its obligation to pay the City the cost of completion, to commence and to complete all Work as provided herein, or to tender a completion contractor.

Performance Bond #1 (Pages 90 to 93): Use if the total contract price is \$5 Million Or Less. Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA") for participation in its Bond Guarantee Program.

PERFORMANCE BOND #1 (Page 3)

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

(Seal)

Principal (L.S.)

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

Bond Premium Rate _____

Bond Premium Cost _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

Performance Bond #1 (Pages 90 to 93): Use if the total contract price is \$5 Million Or Less.
Performance Bond #1 has been approved by the U.S. Small Business Administration ("SBA")
for participation in its Bond Guarantee Program.

PERFORMANCE BOND #1 (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties;
(b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by
agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions
of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was
issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

* * * * *

Affix Acknowledgments and Justification of Sureties

Performance Bond #2 (Pages 94 to 97): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 1)

PERFORMANCE BOND #2

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____

hereinafter referred to as the "Principal", and _____

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

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

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

Performance Bond #2 (Pages 94 to 97): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page2)

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 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 94 to 97): Use if the total contract price is more than \$5 Million.

PERFORMANCE BOND #2 (Page 3)

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

(Seal)

Principal (L.S.)

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

By: _____

(Seal)

Surety

Bond Premium Rate _____

Bond Premium Cost _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of _____ County of _____ ss:

On this _____ day of _____, 20____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____; that he/she is the _____ of _____ the corporation described in and which executed the foregoing instrument; and that he signed his name to the foregoing instrument by order of the directors of said corporation as the duly authorized and binding act thereof.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

On this _____ day of _____, 20____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____; that he/she is _____ partner of _____, a limited/general partnership existing under the laws of the State of _____, the partnership described in and which executed the foregoing instrument; and that he/she signed his/her name to the foregoing instrument as the duly authorized and binding act of said partnership.

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

On this _____ day of _____ 20____ before me personally came _____ to me known, who, being by me duly sworn did depose and say that he/she resides at _____, and that he/she is the individual whose name is subscribed to the within instrument and acknowledged to me that by his/her signature on the instrument, said individual executed the instrument.

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

* * * * *

Affix Acknowledgments and Justification of Sureties.

Payment Bond (Pages 98 to 101): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 1)

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, _____

hereinafter referred to as the "Principal", and _____

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

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

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the City for

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns and other Subcontractors to whom Work under this Contract is sublet and his or their successors and assigns shall promptly pay or cause to be paid all lawful claims for

(a) Wages and compensation for labor performed and services rendered by all persons engaged in the prosecution of the Work under said Contract, and any amendment or extension thereof or addition thereto, whether such persons be agents servants or employees of the Principal or any such Subcontractor, including all persons so

Payment Bond (Pages 98 to 101): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 2)

engaged who perform the work of laborers or mechanics at or in the vicinity of the site 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 98 to 101): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 3)

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

(Seal) _____ (L.S.)
Principal

By: _____

(Seal) _____
Surety

By: _____

(Seal) _____
Surety

By: _____

(Seal) _____
Surety

By: _____

(Seal) _____
Surety

By: _____

If the Contractor (Principal) is a partnership, the bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a corporation, the bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Contract.

Payment Bond (Pages 98 to 101): Use for any contract for which a Payment Bond is required.

PAYMENT BOND (Page 4)

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____ County of _____ ss:

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

Notary Public or Commissioner of Deeds

Each executed bond should be accompanied by: (a) appropriate acknowledgments of the respective parties; (b) appropriate duly certified copy of Power of Attorney or other certificate of authority where bond is executed by agent, officer or other representative of Principal or Surety; (c) a duly certified extract from By-Laws or resolutions of Surety under which Power of Attorney or other certificate of authority of its agent, officer or representative was issued, and (d) certified copy of latest published financial statement of assets and liabilities of Surety.

* * * * *

Affix Acknowledgments and Justification of Sureties

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

LABOR LAW §220 PREVAILING WAGE SCHEDULE

Workers, Laborers and Mechanics employed on a public work project must receive not less than the prevailing rate of wage and benefits for the classification of work performed by each upon such public work. Pursuant to Labor Law §220 the Comptroller of the City of New York has promulgated this schedule solely for Workers, Laborers and Mechanics engaged by private contractors on New York City public work contracts.

Contracting agencies anticipating doing work which requires the employment of a trade or classification not included in this schedule must request the Comptroller to establish a proper classification for the work pursuant to Labor Law §220 (3-a) (a). The prevailing rate schedule as promulgated by the Comptroller, must, in compliance with law, be annexed to and form part of the contract.

Contractors are solely responsible for maintaining original payroll records which delineate, among other things, the hours each employee worked within a given classification. Contractors using rates and/or classifications not promulgated by the Comptroller do so at their own risk. Additionally, prior to bid, Agency Chief Contracting Officers must contact the Bureau of Labor Law when the need arises for a work classification not published in this schedule.

The appropriate schedule of prevailing wages and benefits must be posted at all public work sites pursuant to Labor Law §220 (3-a) (a).

This schedule is applicable for work performed during the effective period, unless otherwise noted. You will be notified of any changes to this schedule by addenda published on our web site at www.comptroller.nyc.gov. The rate of wages and supplemental benefits to be paid or provided are those that prevail at the time the work is being performed. Preliminary schedules for future one-year periods are published annually in the City Record on or about June 1st of each succeeding year. Final schedules are published on or about July 1st in the City Record and on our web site at www.comptroller.nyc.gov.

The Comptroller's Office has attempted to include all overtime, shift and night differential, Holiday, Saturday, Sunday or other premium time work. However, this schedule does not set forth every prevailing practice with respect to such rates with which employers must comply. All such practices are nevertheless part of the employer's prevailing wage obligation and contained in the collective bargaining agreements of the prevailing wage unions. These collective bargaining agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4443, Monday through Friday between the hours of 9 a.m. and 5 p.m.

Answers to questions concerning prevailing trade practices may be obtained from the Classification Unit by calling (212) 669-7974. Please direct all other compliance issues to: Bureau of Labor Law, Attn: Wasyl Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

Prevailing rates and ratios for apprentices are attached to this schedule in the Appendix. Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant, registered with the New York State Department of Labor, may be employed on a public work project. Workers who are not journey persons or not registered apprentices pursuant to Labor Law §220 (3-e) may not be substituted for apprentices and must be paid as journey persons.

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

Contractors are advised to review the applicable Collective Bargaining Agreements and the Comptroller's Prevailing Wage Schedule before bidding on Public Work. If there are any questions concerning prevailing wages, benefits, overtime, Holiday pay, shift differentials or any prevailing practice, please contact this office.

Public Work construction, reconstruction, demolition, excavation, rehabilitation, repair, renovation, alteration, or improvement contracts awarded pursuant to a Project Labor Agreement ("PLA") in accordance with Labor Law section 222 may have different labor standards for shift, premium and overtime work. Please refer to the PLA's pre-negotiated labor agreements for wage and benefit rates applicable to work performed outside of the regular workday. More information is available at the Mayor's Office of Contract Services (MOCS) web page at <http://www.nyc.gov/html/mocs/html/vendors/pla.shtml>.

All the provisions of Labor Law section 220 remain applicable to PLA work including, but not limited to, the enforcement of prevailing wage requirements by the Comptroller; however, we will enforce shift, premium, overtime and other non-standard rates as they appear in a project's pre-negotiated labor agreement.

Any error as to compensation under the prevailing wage law or other information as to trade classification, made by the contracting agency in the contract documents or in any other communication, will not preclude a finding against the contractor of prevailing wage violation.

In order to meet their obligation to provide prevailing supplemental benefits to each covered employee, employers must either:

- 1) Provide bona-fide benefits which cost the employer no less than the prevailing supplemental benefits rate; or
- 2) Supplement the employee's hourly wage by an amount no less than the prevailing supplemental benefits rate; or
- 3) Provide a combination of bona-fide benefits and wage supplements which cost the employer no less than the prevailing supplemental benefits rate in total.

Particular attention should be given to the supplemental benefits requirement. Although in most instances the payment or provision for supplemental benefits is for each hour worked, some classifications require the payment or provision of supplemental benefits for each hour paid. Consequently, some prevailing practices require benefits to be purchased at the overtime, shift differential, Holiday, Saturday, Sunday or other premium time rate.

Benefits are paid for **EACH HOUR WORKED** unless otherwise noted.

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

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

220 SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS ADDENDUM
EFFECTIVE PERIOD JANUARY 20, 2014 THROUGH JUNE 30, 2014

List of Amended Classifications

1. ASBESTOS HANDLER
2. BRICKLAYER
3. CARPENTER - BUILDING COMMERCIAL
4. CEMENT & CONCRETE WORKER
5. CORE DRILLER
6. ELECTRICIAN
7. FLOOR COVERER
8. HEAT AND FROST INSULATOR
9. HOUSE WRECKER
10. IRON WORKER - ORNAMENTAL
11. IRON WORKER - STRUCTURAL
12. MARBLE MECHANIC
13. MASON TENDER
14. MASON TENDER (INTERIOR DEMOLITION WORKER)
15. MOSAIC MECHANIC
16. PAINTER - STRUCTURAL STEEL
17. PLASTERER
18. PLASTERER - TENDER
19. PLUMBER
20. PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)
21. PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)
22. PLUMBER: PUMP & TANK
23. ROOFER
24. STEAMFITTER
25. STEAMFITTER - REFRIGERATION AND AIR CONDITIONER
26. STONE MASON - SETTER
27. TILE FINISHER
28. TILE LAYER - SETTER

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

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

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\$220 PREVAILING WAGE SCHEDULE

ASBESTOS HANDLER

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

Asbestos Handler

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$35.90

Supplemental Benefit Rate per Hour: \$15.05

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$36.00

Supplemental Benefit Rate per Hour: \$15.45

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Sunday.

Time and one half the regular hourly rate after 40 hours in any work week.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Easter

Paid Holidays

None

(Local #78 and Local #12A)

BLASTER

Blaster

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$44.40

Supplemental Benefit Rate per Hour: \$38.44

Blaster (Hydraulic)

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Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$45.17
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Trac Drill Hydraulic

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$40.04
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Wagon: Air Trac: Quarry Bar: Drillrunners

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$39.30
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Operators of Jack Hammers

Chippers: Spaders: Concrete Breakers: and all other pneumatic tools of like usage: Walk Behind Self Propelled Hydraulic Asphalt and Concrete Breakers: Hydro (Water) Demolition

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$38.32
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Powder Carriers

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$34.66
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Hydraulic Trac Drill Chuck Tender

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$33.46
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Chuck Tender & Nipper

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$32.75
Supplemental Benefit Rate per Hour: \$38.44

Blaster - Magazine Keepers: (Watch Person)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$19.76
Supplemental Benefit Rate per Hour: \$38.44

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Overtime Description

Magazine Keepers:

Time and one half for work performed in excess of forty (40) hours per week and for work performed on Saturdays, Sundays and Holidays.

All Other Employees:

Time and one-half for the first eight hours of work on Saturday and for Make-up Time. Double time for all hours over eight Monday through Friday (except make-up hours) and for all hours worked on Sunday and Holidays.

Overtime

Double time the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

A single shift shall be 8 hours plus an unpaid lunch, starting at 8:00 A.M. (or between 6:00 A.M. and 10:00 A.M. on weekdays). When two (2) shifts are employed, each shift shall be 8 hours plus ½ hour unpaid lunch. When three (3) shifts are employed, each shift will work seven and one-half (7 ½) hours, but will be paid for eight (8) hours, since only one-half (½) hour is allowed for mealtime. When two (2) or more shifts are employed, single time will be paid for each shift. The first 8 hours of any and all work performed Monday through Friday inclusive of any off-shift shall be at the single time rate.

(Local #29)

BOILERMAKER

Boilermaker

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$49.47

Supplemental Benefit Rate per Hour: \$39.78

Supplemental Note: For time and one half overtime - \$59.08; For double overtime - \$78.37.

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$50.45

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Supplemental Benefit Rate per Hour: \$41.31

Supplemental Note: For time and one half overtime - \$61.37; For double overtime - \$81.43.

Overtime Description

For Repair and Maintenance work:

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

For New Construction work:

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Columbus Day

Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

Quadruple time the regular rate for work on the following holiday(s).

Labor Day

Paid Holidays

Good Friday

Day after Thanksgiving

Day before Christmas

Day before New Year's Day

Shift Rates

When shifts are required, the first shift shall work eight (8) hours at the regular straight-time hourly rate. The second shift shall work seven and one-half (7 ½) hours and receive eight hours at the regular straight time hourly rate plus twenty-five cents (\$0.25) per hour. The third shift shall work seven (7) hours and receive eight hours at the regular straight time hourly rate plus fifty cents (\$0.50) per hour. A thirty (30) minute lunch period shall not be considered as time worked. Work in excess of the above shall be paid overtime at the appropriate new construction work or repair work overtime wage and supplemental benefit hourly rate.

(Local #5)

BRICKLAYER

Bricklayer

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$46.44

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

Supplemental Benefit Rate per Hour: \$27.53

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$47.78

Supplemental Benefit Rate per Hour: \$28.03

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Overtime rates to be paid outside the regular scheduled work day.

(Bricklayer District Council)

CARPENTER - BUILDING COMMERCIAL

Building Commercial

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$48.08

Supplemental Benefit Rate per Hour: \$41.10

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$48.88

Supplemental Benefit Rate per Hour: \$42.70

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

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

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

The second shift will receive one hour at the double time rate of pay for the last hour of the shift; eight hours pay for seven hours of work, nine hours pay for eight hours of work. There must be a first shift in order to work a second shift.

(Carpenters District Council)

CARPENTER - HEAVY CONSTRUCTION WORK
(Construction of Engineering Structures and Building Foundations)

Heavy Construction Work

Effective Period: 7/1/2013 - 7/17/2013

Wage Rate per Hour: \$46.74

Supplemental Benefit Rate per Hour: \$42.37

Effective Period: 7/18/2013 - 6/30/2014

Wage Rate per Hour: \$46.82

Supplemental Benefit Rate per Hour: \$44.97

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day

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

Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

CEMENT & CONCRETE WORKER

Cement & Concrete Worker

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$42.33

Supplemental Benefit Rate per Hour: \$26.17

Supplemental Note: \$28.92 on Saturdays; \$31.67 on Sundays & Holidays

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$42.38

Supplemental Benefit Rate per Hour: \$26.17

Supplemental Note: \$28.92 on Saturdays; \$31.67 on Sundays & Holidays

Overtime Description

Time and one half the regular rate after 7 hour day (time and one half the regular rate after an 8 hour day when working with Dockbuilders on pile cap forms and for work below street level to the top of the foundation wall, not to exceed 2 feet or 3 feet above the sidewalk-brick shelf, when working on the foundation and structure.)

Overtime

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day

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

Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

1/2 day before Christmas Day
1/2 day before New Year's Day

Shift Rates

On shift work extending over a twenty-four hour period, all shifts are paid at straight time.

(Cement Concrete Workers District Council)

CEMENT MASON

Cement Mason

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$38.63
Supplemental Benefit Rate per Hour: \$39.05
Supplemental Note: Overtime supplemental benefit rate per hour: \$57.55

Overtime Description

Time and one-half the regular rate after an 8 hour day, double time the regular rate after 10 hours. Time and one-half the regular rate on Saturday, double time the regular rate after 10 hours. Double time the regular rate on Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

Shift Rates

For an off shift day, (work at times other than the regular 7:00 A.M. to 3:30 P.M. work day) a cement mason shall be paid at the regular hourly rate plus a 25% per hour differential. Four Days a week at Ten (10)hour day.

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

(Local #780)

CORE DRILLER

Core Driller

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$35.44**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$35.71**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$28.60**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$28.60**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper (Third year in the industry)

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$25.74**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$25.74**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper (Second year in the industry)

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$22.88**

Supplemental Benefit Rate per Hour: **\$19.75**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$22.88**

Supplemental Benefit Rate per Hour: **\$21.69**

Core Driller Helper (First year in the industry)

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$20.02**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Supplemental Benefit Rate per Hour: \$19.75

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$20.02

Supplemental Benefit Rate per Hour: \$21.69

Overtime Description

Time and one half the regular rate for work on a holiday plus Holiday pay when worked.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Shift Rates

The shift day shall be the continuous eight and one-half (8½) hours from 6:00 A.M. to 2:30 P.M. and from 2:30 P.M. to 11:00 P.M., including one-half (½) hour of employees regular rate of pay for lunch. When two (2) or more shifts are employed, single time shall be paid for each shift, but those employees employed on a shift other than from 8:00 A.M. to 5:00 P.M. shall, in addition, receive seventy-five cents (\$0.75) per hour differential for each hour worked. When three (3) shifts are needed, each shift shall work seven and one-half (7 ½) hours paid for eight (8) hours of labor and be permitted one-half (½) hour for mealtime.

(Carpenters District Council)

DERRICKPERSON AND RIGGER

Derrick Person & Rigger

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.00

Supplemental Benefit Rate per Hour: \$46.07

Supplemental Note: The above supplemental rate applies for work performed in Manhattan, Bronx, Brooklyn and Queens. \$47.49 - For work performed in Staten Island.

Derrick Person & Rigger - Site Work

For site work where no rigging is involved.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$30.00

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Supplemental Benefit Rate per Hour: \$31.32

Overtime Description

The first two hours of overtime on weekdays and the first seven hours of work on Saturdays are paid at time and one half for wages and supplemental benefits. All additional overtimes is paid at double time for wages and supplemental benefits. Deduct \$1.42 from the Staten Island hourly benefits rate before computing overtime.

Overtime

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

- New Year's Day
- Washington's Birthday
- Good Friday
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

(Local #197)

DIVER

Diver (Marine)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$59.40

Supplemental Benefit Rate per Hour: \$44.97

Diver Tender (Marine)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.05

Supplemental Benefit Rate per Hour: \$44.97

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

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Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

When three shifts are utilized each shift shall work seven and one half-hours (7 1/2 hours) and paid for 8 hours, allowing for one half hour for lunch.

(Carpenters District Council)

DOCKBUILDER - PILE DRIVER

Dockbuilder - Pile Driver

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$46.82
Supplemental Benefit Rate per Hour: \$44.97

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Presidential Election Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

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Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Carpenters District Council)

DRIVER: TRUCK (TEAMSTER)

Driver - Automobile Chauffeur (Dump Truck)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$38.11**

Supplemental Benefit Rate per Hour: **\$40.20**

Driver - Heavy Equipment Trailer Driver

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.61**

Supplemental Benefit Rate per Hour: **\$40.20**

Note: For time and one half overtime Wage Rate - \$57.16; for double time overtime Wage Rate - \$76.21

Driver - Euclid & Turnapull Operator

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$38.67**

Supplemental Benefit Rate per Hour: **\$40.20**

Driver - Six Wheeler(3 Axle) Tractors & Trailers

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.11**

Supplemental Benefit Rate per Hour: **\$40.20**

Note: For time and one half overtime Wage Rate - \$58.01; for double time overtime Wage Rate - \$77.34

Driver - Boom Truck

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$39.36**

Supplemental Benefit Rate per Hour: **\$40.20**

Note: For time and one half overtime Wage Rate - \$58.01; for double time overtime Wage Rate - \$77.34

Overtime Description

For Paid Holidays: Holiday pay for all holidays shall be prorated based two hours per day for each day worked in the holiday week, not to exceed 8 hours of holiday pay. For Thanksgiving week, the prorated share shall be 5 1/3 hours of holiday pay for each day worked in Thanksgiving week.

Overtime

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Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Driver - Redi-Mix Driver (Sand & Gravel)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$35.71
Supplemental Benefit Rate per Hour: \$37.27

Overtime Description

For Paid Holidays: Employees working two (2) days in the calendar week in which the holiday falls are to paid for these holidays, provided they shape each remaining workday during that calendar week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
President's Day
Columbus Day
Veteran's Day

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Triple time the regular rate for work on the following holiday(s).

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Christmas Day

(Local #282)

ELECTRICIAN

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

Electrician "A" (Regular Day)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$52.00**
Supplemental Benefit Rate per Hour: **\$46.13**

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$53.00**
Supplemental Benefit Rate per Hour: **\$47.54**

Electrician "A" (Regular Day Overtime)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: **\$78.00**
Supplemental Benefit Rate per Hour: **\$49.39**

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: **\$79.50**
Supplemental Benefit Rate per Hour: **\$50.86**

Electrician "A" (Day Shift)

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Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$52.00
Supplemental Benefit Rate per Hour: \$46.13

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$53.00
Supplemental Benefit Rate per Hour: \$47.54

Electrician "A" (Day Shift Overtime After 8 hours)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$78.00
Supplemental Benefit Rate per Hour: \$49.39

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$79.50
Supplemental Benefit Rate per Hour: \$50.86

Electrician "A" (Swing Shift)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$61.01
Supplemental Benefit Rate per Hour: \$52.47

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$62.19
Supplemental Benefit Rate per Hour: \$54.07

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

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$91.52
Supplemental Benefit Rate per Hour: \$56.30

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$93.29
Supplemental Benefit Rate per Hour: \$57.97

Electrician "A" (Graveyard Shift)

Effective Period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$68.34
Supplemental Benefit Rate per Hour: \$57.83

Effective Period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$69.66
Supplemental Benefit Rate per Hour: \$59.59

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

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Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$102.51

Supplemental Benefit Rate per Hour: \$62.11

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$104.49

Supplemental Benefit Rate per Hour: \$63.96

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on a holiday.

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

When so elected by the Employer, one or more shifts of at least five days duration may be scheduled as follows:
Day Shift: 8:00 am to 4:30 pm, Swing Shift 4:30 pm to 12:30 am, Graveyard Shift: 12:30 am to 8:00 am.

For multiple shifts of temporary light and/or power, the temporary light and/or power employee shall be paid for 8 hours at the straight time rate. For three or less workers performing 8 hours temporary light and/or power the supplemental benefit rate is \$22.86 effective 1/20/2014 and \$23.63 effective 5/14/2014.

Electrician "M" (First 8 hours)

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$26.50

Supplemental Benefit Rate per Hour: \$19.56

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$25.80

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$19.21

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$22.00

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$17.30

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$27.00

Supplemental Benefit Rate per Hour: \$20.32

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$26.30

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$19.96

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$22.50

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$18.06

Electrician "M" (Overtime After First 8 hours)

"M" rated work shall be defined as jobbing: electrical work of limited duration and scope, also consisting of repairs and/or replacement of electrical and tele-data equipment. Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

Effective Period: 7/1/2013 - 5/13/2014

Wage Rate per Hour: \$39.75

Supplemental Benefit Rate per Hour: \$21.23

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$38.70

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$20.83

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$33.00

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$18.68

Effective Period: 5/14/2014 - 6/30/2014

Wage Rate per Hour: \$40.50

Supplemental Benefit Rate per Hour: \$21.01

First and Second Year "M" Wage Rate Per Hour - Hired on or before 5/10/07: \$39.45

First and Second Year "M" Supplemental Rate- Hired on or before 5/10/07: \$21.61

First and Second Year "M" Wage Rate Per Hour - Hired after 5/10/07: \$33.75

First and Second Year "M" Supplemental Rate- Hired after 5/10/07: \$19.47

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

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(Local #3)

ELECTRICIAN - ALARM TECHNICIAN
(Scope of Work - Inspect, test, repair, and replace defective, malfunctioning, or broken devices, components and controls of Fire, Burglar and Security Systems)

Alarm Technician

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$30.40

Supplemental Benefit Rate per Hour: \$13.90

Supplemental Note: \$12.40 only after 8 hours worked in a day

Overtime Description

Time and one half the regular rate for work on the following holidays: Columbus Day, Veterans Day, Day after Thanksgiving.

Double time the regular rate for work on the following holidays: New Year's day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Night Differential is based upon a ten percent (10%) differential between the hours of 4:00 P.M. and 12:30 A.M. and a fifteen percent (15%) differential for the hours 12:00 A.M. to 8:00 A.M.

Vacation

At least 1 year of employment.....ten (10) days
5 years or more of employment.....fifteen (15) days
10 years of employment.....twenty (20) days

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Plus one Personal Day per year

Sick Days:
One day per Year

(Local #3)

ELECTRICIAN-STREET LIGHTING WORKER

Electrician - Electro Pole Electrician

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: \$52.00
Supplemental Benefit Rate per Hour: \$47.90

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: \$53.00
Supplemental Benefit Rate per Hour: \$49.34

Electrician - Electro Pole Foundation Installer

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: \$39.42
Supplemental Benefit Rate per Hour: \$36.46

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: \$40.18
Supplemental Benefit Rate per Hour: \$37.73

Electrician - Electro Pole Maintainer

Effective Period: 7/1/2013 - 5/20/2014
Wage Rate per Hour: \$33.75
Supplemental Benefit Rate per Hour: \$32.83

Effective Period: 5/21/2014 - 6/30/2014
Wage Rate per Hour: \$34.40
Supplemental Benefit Rate per Hour: \$34.00

Overtime Description

Electrician - Electro Pole Electrician: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week.
Electrician - Electro Pole Foundation Installer: Time and one half the regular rate after 8 hours within a 24 hour period and Saturday and Sunday.
Electrician - Electro Pole Maintainer: Time and one half the regular rate after a 7 hour day and after 5 consecutive days worked per week. Saturdays and Sundays may be used as a make-up day at straight time when a day is lost during the week to inclement weather.

Overtime Holidays

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Time and one half the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Local #3)

ELEVATOR CONSTRUCTOR

Elevator Constructor

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$57.01**

Supplemental Benefit Rate per Hour: **\$34.48**

Overtime Description

For New Construction: work performed after 7 or 8 hour day, Saturday, Sunday or between 4:30pm and 7:00am shall be paid at double time rate.

Existing buildings: work performed after an 8 hour day, Saturday, Sunday or between 5:30pm and 7:00 am shall be paid time and one half.

Overtime

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Vacation

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Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

ELEVATOR REPAIR & MAINTENANCE

Elevator Service/Modernization Mechanic

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.14

Supplemental Benefit Rate per Hour: \$33.02

Overtime Description

For Service Work: Double time - all work performed on Sundays, Holidays, and between midnight and 7:00am.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

For Modernization Work (4pm to 12:30am) - regularly hourly rate plus a (15%) fifteen percent differential.

Vacation

Employer contributes 8% of regular basic hourly rate as vacation pay for employees with more than 15 years of service, and 6% for employees with 5 to 15 years of service, and 4% for employees with less than 5 years of service.

(Local #1)

ENGINEER

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Engineer - Heavy Construction Operating Engineer I

Cherry pickers 20 tons and over and Loaders (rubber tired and/or tractor type with a manufacturer's minimum rated capacity of six cubic yards and over).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$61.05

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$97.68

Engineer - Heavy Construction Operating Engineer II

Backhoes, Basin Machines, Groover, Mechanical Sweepers, Bobcat, Boom Truck, Barrier Transport (Barrier Mover) & machines of similar nature. Operation of Churn Drills and machines of a similar nature, Stetco Silent Hoist and machines of similar nature, Vac-A-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, Cherry pickers. Austin Western, Grove and machines of a similar nature, Scoopmobiles, Monorails, Conveyors, Trenchers: Loaders-Rubber Tired and Tractor: Barber Greene and Eimco Loaders and Eimco Backhoes; Mighty Midget and similar breakers and Tampers, Curb and Gutter Pavers and Motor Patrol, Motor Graders and all machines of a similar nature. Locomotives 10 Tons or under. Mini-Max, Break-Tech and machines of a similar nature; Milling machines, robotic and demolition machines and machines of a similar nature, shot blaster, skid steer machines and machines of a similar nature including bobcat, pile rig rubber-tired excavator (37,000 lbs. and under), 2 man auger.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$59.24

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$94.78

Engineer - Heavy Construction Operating Engineer III

Minor Equipment such as Tractors, Post Hole Diggers, Ditch Witch (Walk Behind), Road Finishing Machines, Rollers five tons and under, Tugger Hoists, Dual Purpose Trucks, Fork Lifts, and Dempsey Dumpers, Fireperson.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$56.22

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: \$89.95

Engineer - Heavy Construction Maintenance Engineer I

Installing, Repairing, Maintaining, Dismantling and Manning of all equipment including Steel Cutting, Bending and Heat Sealing Machines, Mechanical Heaters, Grout Pumps, Bentonite Pumps & Plants, Screening Machines, Fusion Coupling Machines, Tunnel Boring Machines Moles and Machines of a similar nature, Power Packs, Mechanical Hydraulic Jacks; all drill rigs including but not limited to Churn, Rotary Caisson, Raised Bore & Drills of a similar nature; Personnel, Inspection & Safety Boats or any boats used to perform functions of same, Mine Hoists, Whirlies, all Climbing Cranes, all Tower Cranes, including but not limited to Truck Mounted and Crawler Type and machines of similar nature; Maintaining Hydraulic Drills and machines of a similar nature; Well Point System-Installation and dismantling; Burning, Welding, all Pumps regardless of size and/or motor power, except

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River Cofferdam Pumps and Wells Point Pumps; Motorized Buggies (three or more); equipment used in the cleaning and televising of sewers, but not limited to jet-rodder/vacuum truck, vacall/vactor, closed circuit television inspection equipment; high powered water pumps, jet pumps; screed machines and concrete finishing machines of a similar nature; vermeers.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$58.97
Supplemental Benefit Rate per Hour: \$31.93
Supplemental Note: \$57.46 on overtime
Shift Wage Rate: \$94.35

Engineer - Heavy Construction Maintenance Engineer II

On Base Mounted Tower Cranes

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$77.30
Supplemental Benefit Rate per Hour: \$31.93
Supplemental Note: \$57.46 on overtime
Shift Wage Rate: \$123.68

Engineer - Heavy Construction Maintenance Engineer III

On Generators, Light Towers

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$39.10
Supplemental Benefit Rate per Hour: \$31.93
Supplemental Note: \$57.46 on overtime
Shift Wage Rate: \$62.56

Engineer - Heavy Construction Maintenance Engineer IV

On Pumps and Mixers including mud sucking

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$40.11
Supplemental Benefit Rate per Hour: \$31.93
Supplemental Note: \$57.46 on overtime
Shift Wage Rate: \$64.18

Engineer - Heavy Construction Oilers I

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$53.22
Supplemental Benefit Rate per Hour: \$31.93
Supplemental Note: \$57.46 on overtime
Shift Wage Rate: \$85.15

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Engineer - Heavy Construction Oilers II

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

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$36.97**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$59.15**

Engineer - Steel Erection Maintenance Engineers

Derrick, Travelers, Tower, Crawler Tower and Climbing Cranes

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$57.05**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$91.28**

Engineer - Steel Erection Oiler I

On a Truck Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$53.43**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$85.49**

Engineer - Steel Erection Oiler II

On a Crawler Crane

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$40.84**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Shift Wage Rate: **\$65.34**

Overtime Description

On jobs of more than one shift, if the next shift employee fails to report for work through any cause over which the employer has no control, the employee on duty who works the next shift continues to work at the single time rate.

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

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Double time the regular rate for work on the following holiday(s).

Paid Holidays

- New Year's Day
- Lincoln's Birthday
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Engineer - Building Work Maintenance Engineers I

Installing, repairing, maintaining, dismantling (of all equipment including: Steel Cutting and Bending Machines, Mechanical Heaters, Mine Hoists, Climbing Cranes, Tower Cranes, Linden Peine, Lorain, Liebherr, Mannes, or machines of a similar nature, Well Point Systems, Deep Well Pumps, Concrete Mixers with loading Device, Concrete Plants, Motor Generators when used for temporary power and lights), skid steer machines of a similar nature including bobcat.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$54.04**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Engineer - Building Work Maintenance Engineers II

On Pumps, Generators, Mixers and Heaters

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$42.10**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

Engineer - Building Work Oilers I

All gasoline, electric, diesel or air operated Gradealls: Concrete Pumps, Overhead Cranes in Power Houses: Their duties shall be to assist the Engineer in oiling, greasing and repairing of all machines; Driving Truck Cranes: Driving and Operating Fuel and Grease Trucks, Cherrypickers (hydraulic cranes) over 70,000 GVW, and machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$51.40**

Supplemental Benefit Rate per Hour: **\$31.93**

Supplemental Note: \$57.46 on overtime

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Engineer - Building Work Oilers II

Oilers on Crawler Cranes, Backhoes, Trenching Machines, Gunite Machines, Compressors (three or more in Battery).

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.31

Supplemental Benefit Rate per Hour: \$31.93

Supplemental Note: \$57.46 on overtime

Overtime Description

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Shift Rates

Off Shift: double time the regular hourly rate.

(Local #15)

ENGINEER - CITY SURVEYOR AND CONSULTANT

Party Chief

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.55

Supplemental Benefit Rate per Hour: \$17.65

Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

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Wage Rate per Hour: \$29.41
Supplemental Benefit Rate per Hour: \$17.65

Rodperson

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$25.54
Supplemental Benefit Rate per Hour: \$17.65

Overtime Description

Overtime Benefit Rate - \$23.63 per hour (time & one half) \$29.95 per hour (double time).
Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

- New Year's Day
- Lincoln's Birthday
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (BUILDING CONSTRUCTION)
(Construction of Building Projects, Concrete Superstructures, etc.)

Field Engineer - BC Party Chief

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$55.40
Supplemental Benefit Rate per Hour: \$30.62
Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 per hour (double time).

Field Engineer - BC Instrument Person

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$43.10
Supplemental Benefit Rate per Hour: \$30.62
Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 per hour (double time).

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Field Engineer - BC Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$27.96

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime Benefit Rate - \$42.73 per hour (time & one half) \$54.84 per hour (double time).

Overtime Description

Time and one half the regular rate after a 7 hour work and time and one half the regular rate for Saturday for the first seven hours worked, Double time the regular time rate for Saturday for work performed in excess of seven hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

(Operating Engineer Local #15-D)

ENGINEER - FIELD (HEAVY CONSTRUCTION)

(Construction of Roads, Tunnels, Bridges, Sewers, Building Foundations, Engineering Structures etc.)

Field Engineer - HC Party Chief

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$62.61

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - HC Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$46.00

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - HC Rodperson

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Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$38.61

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Overtime Description

Time and one half the regular rate after an 8 hour day, Time and one half the regular rate for Saturday for the first eight hours worked, Double time the regular time rate for Saturday for work performed in excess of eight hours, Double time the regular rate for Sunday and Double time the regular rate for work on a holiday.

Paid Holidays

New Year's Day

Lincoln's Birthday

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Operating Engineer Local #15-D

ENGINEER - FIELD (STEEL ERECTION)

Field Engineer - Steel Erection Party Chief

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$58.50

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - Steel Erection Instrument Person

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.53

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

Field Engineer - Steel Erection Rodperson

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$30.43

Supplemental Benefit Rate per Hour: \$30.62

Supplemental Note: Overtime benefit rate - \$42.73 per hour (time & one half), \$54.84 per hour (double time).

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Overtime Description

Time and one half the regular rate for Saturday for the first eight hours worked.
Double time the regular rate for Saturday for work performed in excess of eight hours.

Overtime

Time and one half the regular rate after an 8 hour day.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

- New Year's Day
- Lincoln's Birthday
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday.

(Operating Engineer Local #15-D)

ENGINEER - OPERATING

Operating Engineer - Road & Heavy Construction I

Back Filling Machines, Cranes, Mucking Machines and Dual Drum Paver.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$67.70**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: **\$51.75** overtime hours

Shift Wage Rate: **\$108.32**

Operating Engineer - Road & Heavy Construction II

Backhoes, Power Shovels, Hydraulic Clam Shells, Steel Erection, Moles and machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$70.10**

Supplemental Benefit Rate per Hour: **\$28.60**

Supplemental Note: **51.75** overtime hours

Shift Wage Rate: **\$112.16**

Operating Engineer - Road & Heavy Construction III

Mine Hoists, Cranes, etc. (Used as Mine Hoists)

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Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$72.34
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$115.74

Operating Engineer - Road & Heavy Construction IV

Gradealls, Keystones, Cranes on land or water (with digging buckets), Bridge Cranes, Vermeer Cutter and machines of a similar nature, Trenching Machines.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$70.63
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$113.01

Operating Engineer - Road & Heavy Construction V

Pile Drivers & Rigs (employing Dock Builder foreperson): Derrick Boats, Tunnel Shovels.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$69.23
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$110.77

Operating Engineer - Road & Heavy Construction VI

Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power Houses (Low Air Pressure Units).

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$65.76
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$105.22

Operating Engineer - Road & Heavy Construction VII

Barrier Movers, Barrier Transport and Machines of a Similar Nature.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$53.08
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$84.93

Operating Engineer - Road & Heavy Construction VIII

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Utility Compressors

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$41.18
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$51.93

Operating Engineer - Road & Heavy Construction IX

Horizontal Boring Rig

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$62.53
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$100.05

Operating Engineer - Road & Heavy Construction X

Elevators (manually operated as personnel hoist)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$57.46
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$91.94

Operating Engineer - Road & Heavy Construction XI

Compressors (Portable 3 or more in battery), Driving of Truck Mounted Compressors, Well-point Pumps, Tugger Machines Well Point Pumps, Churn Drill.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$44.63
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$71.41

Operating Engineer - Road & Heavy Construction XII

All Drills and Machines of a similar nature.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$66.45
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$106.32

Operating Engineer - Road & Heavy Construction XIII

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

Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoist, Power Houses (other than above).

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$64.34
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$102.94

Operating Engineer - Road & Heavy Construction XIV

Concrete Mixer

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$61.53
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$98.45

Operating Engineer - Road & Heavy Construction XV

Compressors (Portable Single or two in Battery, not over 100 feet apart), Pumps (River Cofferdam) and Welding Machines, Push Button Machines, All Engines Irrespective of Power (Power-Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$41.44
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$66.30

Operating Engineer - Road & Heavy Construction XVI

Concrete Breaking Machines, Hoists (Single Drum), Load Masters, Locomotives (over ten tons) and Dinkies over ten tons, Hydraulic Crane-Second Engineer.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$58.74
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.85 overtime hours
Shift Wage Rate: \$93.98

Operating Engineer - Road & Heavy Construction XVII

On-Site concrete plant engineer, On-site Asphalt Plant Engineer, and Vibratory console.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$59.21
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$94.74

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

Operating Engineer - Road & Heavy Construction XVIII

Tower Crane

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$85.00
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$136.00

Operating Engineer - Paving I

Asphalt Spreaders, Autogrades (C.M.I.), Roto/Mil

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$65.76
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$105.22

Operating Engineer - Paving II

Asphalt Roller

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$64.04
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$102.46

Operating Engineer - Paving III

Asphalt Plants

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$54.17
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$86.67

Operating Engineer - Concrete I

Cranes

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$70.32
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Concrete II

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

Compressors

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$41.76
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Concrete III

Micro-traps (Negative Air Machines), Vac-All Remediation System.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$56.16
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Steel Erection I

Three Drum Derricks

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$73.37
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$117.39

Operating Engineer - Steel Erection II

Cranes, 2 Drum Derricks, Hydraulic Cranes, Fork Lifts and Boom Trucks.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$70.50
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$112.80

Operating Engineer - Steel Erection III

Compressors, Welding Machines.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$41.84
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
Shift Wage Rate: \$66.94

Operating Engineer - Steel Erection IV

Compressors - Not Combined with Welding Machine.

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$39.85**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: **\$51.75** overtime hours
Shift Wage Rate: **\$63.76**

Operating Engineer - Building Work I

Forklifts, Plaster (Platform machine), Plaster Bucket, Concrete Pump and all other equipment used for hoisting material.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$57.82**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: **\$51.75** overtime hours

Operating Engineer - Building Work II

Compressors, Welding Machines (Cutting Concrete-Tank Work), Paint Spraying, Sandblasting, Pumps (with the exclusion of Concrete Pumps), All Engines irrespective of Power (Power-Pac) used to drive Auxiliary Equipment, Air, Hydraulic, Jacking System, etc.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$43.28**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: **\$51.75** overtime hours

Operating Engineer - Building Work III

Double Drum

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$65.83**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: **\$51.75** overtime hours

Operating Engineer - Building Work IV

Stone Derrick, Cranes, Hydraulic Cranes Boom Trucks.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$69.74**
Supplemental Benefit Rate per Hour: **\$28.60**
Supplemental Note: **\$51.75** overtime hours

Operating Engineer - Building Work V

Dismantling and Erection of Cranes, Relief Engineer.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$64.26**

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

Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work VI

4 Pole Hoist, Single Drum Hoists.

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$63.58
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours

Operating Engineer - Building Work VII

Rack & Pinion and House Cars

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$50.53
Supplemental Benefit Rate per Hour: \$28.60
Supplemental Note: \$51.75 overtime hours
For New House Car projects started after 7/1/11 only: Wage Rate per Hour \$40.31

Overtime Description

On jobs of more than one shift, if an Employee fails to report for work through any cause over which the Employer has no control, the Employee on duty will continue to work at the rate of single time.

For House Cars and Rack & Pinion only: Overtime paid at time and one-half for all hours in excess of eight hours in a day, Saturday, Sunday and Holidays worked.

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Lincoln's Birthday
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Employees must work at least one day in the payroll week in which the holiday occurs to receive the paid holiday

Shift Rates

For Steel Erection Only: Shifts may be worked at the single time rate at other than the regular working hours (8:00 A.M. to 4:30 P.M.) on the following work ONLY: Heavy construction jobs on work below the street level, over railroad tracks and on building jobs.

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

(Operating Engineer Local #14)

FLOOR COVERER

(Interior vinyl composition tile, sheath vinyl linoleum and wood parquet tile including site preparation and synthetic turf not including site preparation)

Floor Coverer

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$46.15**

Supplemental Benefit Rate per Hour: **\$38.50**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$48.88**

Supplemental Benefit Rate per Hour: **\$42.70**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

Two shifts may be utilized with the first shift working 8:00 A.M. to the end of the shift at the straight time of pay. The second shift will receive one hour at double time rate for the last hour of the shift. (eight for seven, nine for eight).

(Carpenters District Council)

GLAZIER
(New Construction, Remodeling, and Alteration)

Glazier

Effective Period: 7/1/2013 - 10/31/2013

Wage Rate per Hour: **\$42.00**

Supplemental Benefit Rate per Hour: **\$33.24**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$41.24**

Effective Period: 11/1/2013 - 6/30/2014

Wage Rate per Hour: **\$42.00**

Supplemental Benefit Rate per Hour: **\$34.09**

Supplemental Note: Supplemental Benefit Overtime Rate: **\$42.59**

Overtime Description

An optional 8th hour can be worked at straight time rate. If 9th hour is worked, then both hours or more (8th & 9th or more) will be at the double time rate of pay.

Overtime

Double time the regular rate after a 7 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

Shifts shall be any 7 hours beyond 4:00 P.M. for which the glazier shall receive 8 hours pay for 7 hours worked.

(Local #1281)

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

GLAZIER - REPAIR & MAINTENANCE

(For the Installation of Glass - All repair and maintenance work on a particular building, whenever performed, where the total cumulative contract value is under \$105,000. Except where enumerated (i.e. plate glass windows) does not apply to non-residential buildings.)

Craft Jurisdiction for repair, maintenance and fabrication

Plate glass replacement, Residential glass replacement, Residential mirrors and shower doors, Storm windows and storm doors, Residential replacement windows, Herculite door repairs, Door closer repairs, Retrofit apartment house (non commercial buildings), Glass tinting.

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: **\$23.50**

Supplemental Benefit Rate per Hour: **\$18.54**

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: **\$23.60**

Supplemental Benefit Rate per Hour: **\$19.04**

Overtime

Time and one half the regular rate after an 8 hour day.

Double time the regular rate for Sunday.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

(Local #1281)

HEAT AND FROST INSULATOR

Heat & Frost Insulator

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$56.48**

Supplemental Benefit Rate per Hour: **\$33.31**

Effective Period: 1/20/2014 - 6/30/2014

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

Wage Rate per Hour: \$56.98

Supplemental Benefit Rate per Hour: \$34.81

Overtime Description

Double time shall be paid for supplemental benefits during overtime work.
8th hour paid at time and one half.

Overtime

Double time the regular rate after an 8 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Triple time the regular rate for work on the following holiday(s).
Labor Day

Paid Holidays

None

Shift Rates

The first shift shall work seven hours at the regular straight time rate. The second and third shift shall work seven hours the regular straight time hourly rate plus a fourteen percent wage and benefit premium.
Off hour work in occupied or retail buildings may be worked on weekdays with an increment of \$1.00 per hour and eight hours pay for seven (7) hours worked. Double time will apply for over seven (7) hours worked on weekdays, weekends or holidays.

(Local #12)

HOUSE WRECKER (TOTAL DEMOLITION)

House Wrecker - Tier A

On all work sites the first, second, eleventh and every third House Wrecker thereafter shall be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). The 10th and 20th House Wrecker shall be apprentices. Other House Wreckers shall be Tier B House Wreckers.

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

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$34.01

Supplemental Benefit Rate per Hour: \$25.14

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$34.51

Supplemental Benefit Rate per Hour: \$25.59

House Wrecker - Tier B

On all work sites the first, second, eleventh and every third House Wrecker thereafter shall be Tier A House Wreckers (i.e. 1st, 2nd, 11th, 14th etc). The 10th and 20th House Wrecker shall be apprentices. Other House Wreckers shall be Tier B House Wreckers.

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$23.75

Supplemental Benefit Rate per Hour: \$18.62

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$24.02

Supplemental Benefit Rate per Hour: \$19.12

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

(Mason Tenders District Council)

IRON WORKER - ORNAMENTAL

Iron Worker - Ornamental

Effective Period: 7/1/2013 – 1/19/2014

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

Wage Rate per Hour: **\$42.30**

Supplemental Benefit Rate per Hour: **\$43.54**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$42.70**

Supplemental Benefit Rate per Hour: **\$44.57**

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

Time and one half the regular rate after a 7 hour day for a maximum of two hours on any regular work day (the 8th and 9th hour) and double time shall be paid for all work on a regular work day thereafter, time and one half the regular rate for Saturday for the first seven hours of work and double time shall be paid for all work on a Saturday thereafter.

Overtime

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

For off shift work - 8 hours pay for 7 hours of work. When two or three shifts are employed on a job, Monday through Friday, the workday for each shift shall be seven hours and paid for ten and one-half hours at the single time rate. When two or three shifts are worked on Saturday, Sunday or holidays, each shift shall be seven hours and paid fifteen and three-quarters hours.

(Local #580)

IRON WORKER - STRUCTURAL

Iron Worker - Structural

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$46.75**

Supplemental Benefit Rate per Hour: **\$62.48**

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

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$47.25

Supplemental Benefit Rate per Hour: \$64.43

Supplemental Note: Supplemental benefits are to be paid at the applicable overtime rate when overtime is in effect.

Overtime Description

Monday through Friday- the first eight hours are paid at straight time, the 9th and 10th hours are paid at time and one-half the regular rate, all additional weekday overtime is paid at double the regular rate. Saturdays- the first eight hours are paid at time and one-half the regular rate, double time thereafter. Sunday- all shifts are paid at double time.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

Monday through Friday - First Shift: First eight hours are paid at straight time, the 9th & 10th hours are paid at time and a half, double time paid thereafter. Second and third Shifts: First eight hours are paid at time and one-half, double time thereafter. Saturdays: All shifts, first eight hours paid at time and one-half, double time thereafter: Sunday all shifts are paid at double time.

(Local #40 & #361)

LABORER

(Foundation, Concrete, Excavating, Street Pipe Layer and Common)

Laborer

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

Excavation and foundation work for buildings, heavy construction, engineering work, and hazardous waste removal in connection with the above work. Landscaping tasks in connection with heavy construction work, engineering work and building projects. Projects include, but are not limited to pollution plants, sewers, parks, subways, bridges, highways, etc.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.25

Supplemental Benefit Rate per Hour: \$33.25

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

Labor Day

Thanksgiving Day

Shift Rates

When two shifts are employed, single time rate shall be paid for each shift. When three shifts are found necessary, each shift shall work seven and one half hours (7 ½), but shall be paid for eight (8) hours of labor, and be permitted one half hour for lunch.

(Local #731)

LANDSCAPING

(Landscaping tasks, as well as tree pruning, tree removing, spraying and maintenance in connection with the planting of street trees and the planting of trees in city parks but not when such activities are performed as part of, or in connection with, other construction or reconstruction projects.)

Landscaper (Above 6 years experience)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$24.25

Supplemental Benefit Rate per Hour: \$12.30

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

Landscaper (3 - 6 years experience)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$23.25
Supplemental Benefit Rate per Hour: \$12.30

Landscaper (up to 3 years experience)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$20.75
Supplemental Benefit Rate per Hour: \$12.30

Groundperson

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$20.75
Supplemental Benefit Rate per Hour: \$12.30

Tree Remover / Pruner

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$29.25
Supplemental Benefit Rate per Hour: \$12.30

Landscaper Sprayer (Pesticide Applicator)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$19.25
Supplemental Benefit Rate per Hour: \$12.30

Watering - Plant Maintainer

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$14.25
Supplemental Benefit Rate per Hour: \$12.30

Overtime Description

For all overtime work performed, supplemental benefits shall include an additional seventy-five (\$0.75) cents per hour.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

New Year's Day
Memorial Day

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

Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Shift Rates

Work performed on a 4pm to 12am shift has a 15% differential. Work performed on a 12am to 8am shift has a 20% differential.

(Local #175)

MARBLE MECHANIC

Marble Setter

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: \$49.19
Supplemental Benefit Rate per Hour: \$32.24

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$50.57
Supplemental Benefit Rate per Hour: \$33.82

Marble Finisher

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: \$39.05
Supplemental Benefit Rate per Hour: \$31.43

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$39.71
Supplemental Benefit Rate per Hour: \$33.10

Marble Polisher

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: \$34.73
Supplemental Benefit Rate per Hour: \$24.60

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$35.64
Supplemental Benefit Rate per Hour: \$25.64

Overtime Description

Supplemental Benefit contributions are to be made at the applicable overtime rates. Time and one half the regular rate after a 7 hour day or time and one half the regular rate after an 8 hour day - chosen by Employer at the start of the project and then would last for the full duration of the project.

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

Overtime

Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Local #7)

MASON TENDER

Mason Tender

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$35.00**

Supplemental Benefit Rate per Hour: **\$25.74**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$35.53**

Supplemental Benefit Rate per Hour: **\$26.31**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day

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

Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

The Employer may work two (2) shifts with the first shift at the straight time wage rate and the second shift receiving eight (8) hours paid for seven (7) hours work at the straight time wage rate.

(Local #79)

MASON TENDER (INTERIOR DEMOLITION WORKER)

(The erection, building, moving, servicing and dismantling of enclosures, scaffolding, barricades, protection and site safety structures etc., on Interior Demolition jobs.)

Mason Tender Tier A

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$34.07**

Supplemental Benefit Rate per Hour: **\$19.77**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$34.59**

Supplemental Benefit Rate per Hour: **\$20.75**

Mason Tender Tier B

On Interior Demolition job sites 33 1/3 % of the employees shall be classified as Tier A Interior Demolition Workers and 66 2/3 % shall be classified as Tier B Interior Demolition Workers; provided that the employer may employ more than 33 1/3 % Tier A Interior Demolition Workers on the job site. Where the number of employees on a job site is not divisible by 3, the first additional employee (above the number of employees divisible by three) shall be a Tier B Interior Demolition Worker, and the second additional employee shall be a Tier A Interior Demolition Worker.

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$23.27**

Supplemental Benefit Rate per Hour: **\$14.08**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$23.78**

Supplemental Benefit Rate per Hour: **\$15.07**

Overtime

Time and one half the regular rate after an 8 hour day.

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

Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

- New Year's Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas Day

Paid Holidays

None

(Local #79)

METALLIC LATHER

Metallic Lather

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.43

Supplemental Benefit Rate per Hour: \$40.15

Supplemental Note: Supplemental benefits for overtime are paid at the appropriate overtime rate.

Overtime Description

Overtime would be time and one half the regular rate after a seven (7) or eight (8) hours workday, which would be set at the start of the job.

Overtime

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

- New Year's Day
- Washington's Birthday
- Good Friday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Presidential Election Day
- Thanksgiving Day
- Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

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

1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

There shall be either two (2) or three (3) shifts, each shift shall be eight (8) hours with nine (9) hours pay, including one half (1/2) hour for lunch. Off-Hour Start shall commence after 3:30 P.M. and shall conclude by 6:00 A.M. The first consecutive seven (7) hours shall be at straight time with a differential of twelve dollars (\$12.00) per hour. Fringes shall be paid at the straight time rate.

(Local #46)

MILLWRIGHT

Millwright

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$47.69

Supplemental Benefit Rate per Hour: \$48.87

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

1/2 day on New Year's Eve if work is performed in the A.M.

Shift Rates

The first shift shall receive the straight time rate of pay. The second shift receives the straight time rate of pay plus fifteen (15%) per cent. Members of the second shift shall be allowed one half hour to eat, with this time being included in the hours of the workday established. There must be a first shift to work a second shift. All additional hours worked shall be paid at the time and one-half rate of pay plus fifteen (15%) per cent for weekday hours.

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

(Local #740)

MOSAIC MECHANIC

Mosaic Mechanic - Mosaic & Terrazzo Mechanic

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$44.39**

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.08 per hour.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$44.64**

Supplemental Benefit Rate per Hour: **\$35.83**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.80 per hour.

Mosaic Mechanic - Mosaic & Terrazzo Finisher

Effective Period: 7/1/2013 - 1/19/2014

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

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.08 per hour.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$43.03**

Supplemental Benefit Rate per Hour: **\$35.82**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.79 per hour.

Mosaic Mechanic - Machine Operator Grinder

Effective Period: 7/1/2013 - 1/19/2014

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

Supplemental Benefit Rate per Hour: **\$35.11**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.08 per hour.

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$43.03**

Supplemental Benefit Rate per Hour: **\$35.82**

Supplemental Note: Supplemental benefits for overtime to be paid at the rate of \$46.79 per hour.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

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

Good Friday
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays
None

(Local #7)

PAINTER

Painter - Brush & Roller

Effective Period: 7/1/2013 - 4/30/2014
Wage Rate per Hour: **\$37.50**
Supplemental Benefit Rate per Hour: **\$25.62**
Supplemental Note: **\$30.25** on overtime

Effective Period: 5/1/2014 - 6/30/2014
Wage Rate per Hour: **\$39.50**
Supplemental Benefit Rate per Hour: **\$26.12**
Supplemental Note: **\$30.75** on overtime

Spray & Scaffold / Decorative / Sandblast

Effective Period: 7/1/2013 - 4/30/2014
Wage Rate per Hour: **\$40.50**
Supplemental Benefit Rate per Hour: **\$25.62**
Supplemental Note: **\$30.25** on overtime

Effective Period: 5/1/2014 - 6/30/2014
Wage Rate per Hour: **\$42.50**
Supplemental Benefit Rate per Hour: **\$26.12**
Supplemental Note: **\$30.75** on overtime

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).
New Year's Day
President's Day

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

Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Christmas Day

Paid Holidays
None

(District Council of Painters #9)

PAINTER - SIGN

Designer

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$36.15**
Supplemental Benefit Rate per Hour: **\$9.66**

Journeyman

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$33.62**
Supplemental Benefit Rate per Hour: **\$9.66**

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

All work performed outside the regular 8 hour work day (either 7:00 A.M. to 3:30 P.M. or 8:00 A.M. to 4:30 P.M.) shall be paid at time and one half the regular hourly rate.

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

(Local #8A-28A)

PAINTER - STRIPER

Striper (paint)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$33.50**

Supplemental Benefit Rate per Hour: **\$11.62**

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Lineperson (thermoplastic)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$37.50**

Supplemental Benefit Rate per Hour: **\$11.62**

Supplemental Note: Overtime Supplemental Benefit rate - \$7.42; New Hire Rate (0-3 months) - \$0.00

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Employees hired before April 1, 2003: 15% night shift premium differential for work commenced at 9:00 PM or later.

Vacation

Employees with one to two years service shall accrue vacation based on hours worked: 250 hours worked - 1 day vacation; 500 hours worked - 2 days vacation; 750 hours worked - 3 days vacation; 900 hours worked - 4 days vacation; 1,000 hours worked - 5 days vacation. Employees with two to five years service receive two weeks vacation. Employees with five to twenty years service receive three weeks vacation. Employees with twenty to twenty-five years service receive four weeks vacation. Employees with 25 or more years service receive five weeks vacation. Vacation must be taken during winter months. 2 Personal Days except employees hired after 4/1/12 who do not have 2 years of service.

(Local #917)

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

PAINTER - STRUCTURAL STEEL

Painters on Structural Steel

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$47.00**
Supplemental Benefit Rate per Hour: **\$32.08**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$47.00**
Supplemental Benefit Rate per Hour: **\$33.58**

Painter - Power Tool

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$53.00**
Supplemental Benefit Rate per Hour: **\$32.08**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$53.00**
Supplemental Benefit Rate per Hour: **\$33.58**

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

None

Shift Rates

Regular hourly rates plus a ten per cent (10%) differential

(Local #806)

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

PAPERHANGER

Paperhanger

Effective Period: 7/1/2013 - 4/30/2014

Wage Rate per Hour: \$39.00

Supplemental Benefit Rate per Hour: \$29.23

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

Effective Period: 5/1/2014 - 6/30/2014

Wage Rate per Hour: \$41.08

Supplemental Benefit Rate per Hour: \$29.23

Supplemental Note: Supplemental benefits are to be paid at the appropriate straight time and overtime rate.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Paid Holidays

None

Shift Rates

Evening shift - 4:30 P.M. to 12:00 Midnight (regular rate of pay); any work performed before 7:00 A.M. shall be at time and one half the regular base rate of pay.

(District Council of Painters #9)

PAVER AND ROADBUILDER

Paver & Roadbuilder - Formsetter

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$43.54

Supplemental Benefit Rate per Hour: \$33.55

Paver & Roadbuilder - Laborer

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Paving and road construction work, regardless of material used, including but not limited to preparation of job sites, removal of old surfaces, asphalt and/or concrete, by whatever method, including but not limited to milling; laying of concrete; laying of asphalt for temporary, patchwork, and utility paving (but not production paving); site preparation and incidental work before the installation of rubberized materials and similar surfaces; installation and repair of temporary construction fencing; slurry seal coating, maintenance of safety surfaces; play equipment installation, and other related work.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$39.67

Supplemental Benefit Rate per Hour: \$33.55

Production Paver & Roadbuilder - Screed Person

(Production paving is asphalt paving when using a paving machine or on a project where a paving machine is traditionally used)

Adjustment of paving machinery on production paving jobs.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.12

Supplemental Benefit Rate per Hour: \$33.55

Production Paver & Roadbuilder - Raker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$44.61

Supplemental Benefit Rate per Hour: \$33.55

Production Paver & Roadbuilder - Shoveler

General laborer (except removal of surfaces - see Paver and Roadbuilder-Laborer) including but not limited to tamper, AC paint and liquid tar work.

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$41.32

Supplemental Benefit Rate per Hour: \$33.55

Overtime Description

Veteran's Day is a Paid Holiday for employees working on production paving.

If an employee works New Year's Day or Christmas Day, they receive the single time rate plus 25%.

Employees who work on a holiday listed below receive the straight time rate plus one day's pay for the holiday.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Paid Holidays

Memorial Day

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

Independence Day
Labor Day
Presidential Election Day
Thanksgiving Day

Shift Rates

When two shifts are employed, the work period for each shift shall be a continuous eight (8) hours. When three shifts are employed, each shift will work seven and one half (7 ½) hours but will be paid for eight (8) hours since only one half (1/2) hour is allowed for meal time.

When two or more shifts are employed, single time will be paid for each shift.

Night Work - On night work, the first eight (8) hours of work will be paid for at the single time rate, except that production paving work shall be paid at 20% over the single time rate for the screed person, rakers and shovelers directly involved only. All other workers will be exempt. Hours worked over eight (8) hours during said shift shall be paid for at the time and one-half rate.

(Local #1010)

PLASTERER

Plasterer

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$41.13

Supplemental Benefit Rate per Hour: \$24.95

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$41.78

Supplemental Benefit Rate per Hour: \$27.95

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Presidential Election Day

Thanksgiving Day

Christmas Day

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

Paid Holidays

None

Shift Rates

When it is not possible to conduct alteration work during regular work hours, in a building occupied by tenants, said work shall proceed on a shift basis: however work over seven (7) hours in any twenty four (24) hour period, the time after seven (7) hours shall be considered overtime.

The second shift shall start at a time between 3:30 p.m. and 7:00 p.m. and shall consist of seven (7) working hours and shall receive eight (8) hours of wages and benefits at the straight time rate. The workers on the second shift shall be allowed one-half (½) hour to eat with this time being included in the seven (7) hours of work.

(Local #530)

PLASTERER - TENDER

Plasterer - Tender

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$35.00**

Supplemental Benefit Rate per Hour: **\$25.74**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$35.53**

Supplemental Benefit Rate per Hour: **\$26.31**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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When work commences outside regular work hours, workers receive an hour additional (differential) wage and supplement payment. Eight hours pay for seven hours work or nine hours pay for eight hours work.

(Mason Tenders District Council)

PLUMBER

Plumber

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$52.36**

Supplemental Benefit Rate per Hour: **\$37.34**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$74.40**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$64.87**

Supplemental Benefit Rate per Hour: **\$25.18**

Supplemental Note: Overtime supplemental benefit rate per hour: **\$50.08**

Overtime Description

Double time the regular rate after a 7 hour day - unless for new construction site work where the plumbing contract price is \$1.5 million or less, the hours of labor can be 8 hours per day at the employers option. On Alteration jobs when other mechanical trades at the site are working an eighth hour at straight time, then the plumber shall also work an eighth hour at straight time.

Overtime

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Day after Thanksgiving

Christmas Day

Shift Rates

Shift work, when directly specified in public agency or authority documents where plumbing contract is \$8 million or less, will be permitted. 30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday. 50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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(Plumbers Local #1)

PLUMBER (MECHANICAL EQUIPMENT AND SERVICE)
(Mechanical Equipment and Service work shall include any repair and/or replacement of the present plumbing system.)

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: **\$33.46**
Supplemental Benefit Rate per Hour: **\$16.93**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$38.27**
Supplemental Benefit Rate per Hour: **\$12.84**

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

(Plumbers Local # 1)

PLUMBER (RESIDENTIAL RATES FOR 1, 2 AND 3 FAMILY HOME CONSTRUCTION)

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: **\$37.11**
Supplemental Benefit Rate per Hour: **\$25.56**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$44.91**
Supplemental Benefit Rate per Hour: **\$18.37**

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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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.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

30% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shifts Monday to Friday.
50% shift premium shall be paid for wages and fringe benefits for 4:00 pm and midnight shift work performed on weekends. For shift work on holidays, double time wages and fringe benefits shall be paid.

(Plumbers Local #1)

**PLUMBER: PUMP & TANK
(Installation and Maintenance)**

Plumber - Pump & Tank

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$53.01
Supplemental Benefit Rate per Hour: \$31.86

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$62.83
Supplemental Benefit Rate per Hour: \$21.37

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.

Overtime Holidays

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

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular workday (8:00 A.M. to 3:30 P.M.) is to be paid at time and one half the regular hourly rate

(Plumbers Local #1)

POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING RENOVATION)

Pointer - Waterproofer, Caulker Mechanic

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.41

Supplemental Benefit Rate per Hour: \$23.29

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Paid Holidays

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

None

Shift Rates

All work outside the regular work day (an eight hour workday between the hours of 6:00 A.M. and 4:30 P.M.) is to be paid at time and one half the regular rate.

(Bricklayer District Council)

ROOFER

Roofer

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: **\$39.00**

Supplemental Benefit Rate per Hour: **\$27.37**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$40.00**

Supplemental Benefit Rate per Hour: **\$27.87**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

President's Day

Memorial Day

Independence Day

Labor Day

Presidential Election Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

Second shift - Regular hourly rate plus a 10% differential. Third shift - Regular hourly rate plus a 15% differential.

(Local #8)

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

SANDBLASTER - STEAMBLASTER
(Exterior Building Renovation)

Sandblaster / Steamblaster

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.41**

Supplemental Benefit Rate per Hour: **\$23.29**

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

Shift Rates

All work outside the regular work day (an eight hour workday between the hours of 6:00 A.M. and 4:30 P.M.) is to be paid at time and one half the regular rate.

(Bricklayer District Council)

SHEET METAL WORKER

Sheet Metal Worker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$45.96**

Supplemental Benefit Rate per Hour: **\$43.19**

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Sheet Metal Worker - Duct Cleaner

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$12.90
Supplemental Benefit Rate per Hour: \$8.07

Sheet Metal Worker - Fan Maintenance

(The temporary operation of fans or blowers in new or existing buildings for heating and/or ventilation, and/or air conditioning prior to the completion of the project.)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$36.77
Supplemental Benefit Rate per Hour: \$43.19

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

Work that can only be performed outside regular working hours (seven hours of work between 7:30 A.M. and 3:30 P.M.) - First shift (work between 3:30 P.M. and 11:30 P.M.) - 10% differential above the established hourly rate.
Second shift (work between 11:30 P.M. and 7:30 A.M.) - 15% differential above the established hourly rate.

For Fan Maintenance: On all full shifts of fan maintenance work the straight time hourly rate of pay will be paid for each shift, including nights, Saturdays, Sundays, and holidays. No 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)**

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

Sheet Metal Specialty Worker

The first worker to perform this work must be paid at the rate of the Sheet Metal Worker. The second and third workers shall be paid the Specialty Worker Rate. The ratio of One Sheet Metal Worker, then Two Specialty Workers shall be utilized thereafter.

Effective Period: 7/1/2013 - 7/31/2013

Wage Rate per Hour: \$41.28

Supplemental Benefit Rate per Hour: \$22.88

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Effective Period: 8/1/2013 - 6/30/2014

Wage Rate per Hour: \$40.78

Supplemental Benefit Rate per Hour: \$23.38

Supplemental Note: Supplemental benefit contributions are to be made at the applicable overtime rates.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Memorial Day

Independence Day

Labor Day

Columbus Day

Veteran's Day

Thanksgiving Day

Christmas Day

Paid Holidays

None

(Local #28)

SIGN ERECTOR
(Sheet Metal, Plastic, Electric, and Neon)

Sign Erector

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$42.80

Supplemental Benefit Rate per Hour: \$42.17

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

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Time and one half the regular rate for Sunday.
Time and one half the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Election Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Time and one half the regular hourly rate is to be paid for all hours worked outside the regular workday either (7:00 A.M. through 2:30 P.M.) or (8:00 A.M. through 3:30 P.M.)

(Local #137)

STEAMFITTER

Steamfitter I

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$52.50**
Supplemental Benefit Rate per Hour: **\$50.54**
Supplemental Note: Overtime supplemental benefit rate: **\$100.34**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$53.25**
Supplemental Benefit Rate per Hour: **\$51.04**
Supplemental Note: Overtime supplemental benefit rate: **\$101.34**

Overtime

Double time the regular rate after a 7 hour day.
Double time the regular time rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).
New Year's Day
President's Day
Memorial Day

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

Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

Shift Rates

Work performed between 3:30 P.M. and 7:00 A.M. and on Saturdays, Sundays and Holidays shall be at double time the regular hourly rate and paid at the overtime supplemental benefit rate above.

Steamfitter II

For heating, ventilation, air conditioning and mechanical public works contracts with a dollar value not to exceed \$15,000,000 and for fire protection/sprinkler public works contracts not to exceed \$1,500,000.

Effective Period: 7/1/2013 – 1/19/2014

Wage Rate per Hour: \$52.50

Supplemental Benefit Rate per Hour: \$50.54

Supplemental Note: Overtime supplemental benefit rate: \$100.34

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$53.25

Supplemental Benefit Rate per Hour: \$51.04

Supplemental Note: Overtime supplemental benefit rate: \$101.34

Overtime

Double time the regular rate after an 8 hour day.

Double time the regular time rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Paid Holidays

None

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

Shift Rates

May be performed outside of the regular workday except Saturday, Sunday and Holidays. A shift shall consist of eight working hours. All work performed in excess of eight hours shall be paid at double time. No shift shall commence after 7:00 P.M. on Friday or 7:00 P.M. the day before holidays. All work performed after 12:01 A.M. Saturday or 12:01 A.M. the day before a Holiday will be paid at double time. When shift work is performed the wage rate for regular time worked is a thirty percent premium together with fringe benefits.

On Transit Authority projects, where work is performed in the vicinity of tracks all shift work on weekends and holidays may be performed at the regular shift rates.

Local #638

**STEAMFITTER - REFRIGERATION AND AIR CONDITIONER
(Maintenance and Installation Service Person)**

Refrigeration and Air Conditioner Mechanic

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$38.05**

Supplemental Benefit Rate per Hour: **\$12.26**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$38.30**

Supplemental Benefit Rate per Hour: **\$12.76**

Refrigeration and Air Conditioner Service Person V

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$31.26**

Supplemental Benefit Rate per Hour: **\$11.13**

Effective Period: 1/20/2014 - 6/30/2014

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

Supplemental Benefit Rate per Hour: **\$11.55**

Refrigeration and Air Conditioner Service Person IV

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: **\$25.90**

Supplemental Benefit Rate per Hour: **\$10.16**

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: **\$26.07**

Supplemental Benefit Rate per Hour: **\$10.52**

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

Refrigeration and Air Conditioner Service Person III

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$22.23

Supplemental Benefit Rate per Hour: \$9.44

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$22.38

Supplemental Benefit Rate per Hour: \$9.76

Refrigeration and Air Conditioner Service Person II

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$18.44

Supplemental Benefit Rate per Hour: \$8.78

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$18.56

Supplemental Benefit Rate per Hour: \$9.06

Refrigeration and Air Conditioner Service Person I

Filter changing and maintenance thereof, oil and greasing, tower and coil cleaning, scraping and painting, general housekeeping, taking of water samples.

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$13.48

Supplemental Benefit Rate per Hour: \$8.10

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$13.57

Supplemental Benefit Rate per Hour: \$8.30

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day

Independence Day

Labor Day

Veteran's Day

Thanksgiving Day

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

Christmas Day

Double time and one half the regular rate for work on the following holiday(s).

Martin Luther King Jr. Day
President's Day
Memorial Day
Columbus Day

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

(Local #638B)

STONE MASON - SETTER

Stone Mason - Setters

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$47.72**
Supplemental Benefit Rate per Hour: **\$35.28**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$46.56**
Supplemental Benefit Rate per Hour: **\$36.40**

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
Washington's Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

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

Paid Holidays

1/2 day on Christmas Eve if work is performed in the A.M.

Shift Rates

For all work outside the regular workday (8:00 A.M. to 3:30 P.M. Monday through Friday), the pay shall be straight time plus a ten percent (10%) differential.

(Bricklayers District Council)

TAPER

Drywall Taper

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: **\$44.32**

Supplemental Benefit Rate per Hour: **\$21.66**

Effective Period: 1/1/2014 - 6/24/2014

Wage Rate per Hour: **\$44.82**

Supplemental Benefit Rate per Hour: **\$21.66**

Effective Period: 6/25/2014 - 6/30/2014

Wage Rate per Hour: **\$45.32**

Supplemental Benefit Rate per Hour: **\$21.66**

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Martin Luther King Jr. Day

President's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Columbus Day

Thanksgiving Day

Christmas Day

Paid Holidays

Any worker who reports to work on Christmas Eve or New Year's Eve pursuant to his employer's instruction shall be entitled to three (3) hours afternoon pay without working.

Shift Rates

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

Time and one half the regular rate outside the regular work hours (8:00 A.M. through 3:30 P.M.)

(Local #1974)

TELECOMMUNICATION WORKER
(Voice Installation Only)

Telecommunication Worker

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: **\$35.94**

Supplemental Benefit Rate per Hour: **\$13.19**

Supplemental Note: The above rate applies for Manhattan, Bronx, Brooklyn, Queens. \$12.64 for Staten Island only.

Overtime

Time and one half the regular rate after a 7 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Overtime Holidays

Time and one half the regular rate for work on the following holiday(s).

New Year's Day

Lincoln's Birthday

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

Paid Holidays

New Year's Day

Lincoln's Birthday

Washington's Birthday

Memorial Day

Independence Day

Labor Day

Columbus Day

Election Day

Veteran's Day

Thanksgiving Day

Christmas Day

Employees have the option of observing either Martin Luther King's Birthday or the day after Thanksgiving instead of Lincoln's Birthday

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

Shift Rates

For any workday that starts before 8A.M. or ends after 6P.M. there is a 10% differential for the applicable worker's hourly rate.

Vacation

After 6 months.....One week.
After 12 months but less than 7 years.....two weeks.
After 7 or more but less than 15 years.....three weeks.
After 15 years or more but less than 25 years.....four weeks.

(C.W.A.)

TILE FINISHER

Tile Finisher

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$38.49**
Supplemental Benefit Rate per Hour: **\$27.40**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$38.80**
Supplemental Benefit Rate per Hour: **\$28.03**

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

- New Year's Day
- President's Day
- Good Friday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day

Paid Holidays

None

Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

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

(Local #7)

TILE LAYER - SETTER

Tile Layer - Setter

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: **\$48.35**
Supplemental Benefit Rate per Hour: **\$31.44**

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: **\$49.25**
Supplemental Benefit Rate per Hour: **\$31.82**

Overtime

Time and one half the regular rate after a 7 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Shift Rates

Off shift work day (work performed outside the regular 8:00 A.M. to 3:30 P.M. workday): shift differential of one and one quarter (1¼) times the regular straight time rate of pay for the seven hours of actual off-shift work.

(Local #7)

TIMBERPERSON

Timberperson

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: **\$42.63**

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

Supplemental Benefit Rate per Hour: \$44.54

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Saturday may be used as a make-up day at straight time when a day is lost during that week to inclement weather.
Time and one half the regular hourly rate after 40 hours in any work week.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

- New Year's Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Presidential Election Day
- Thanksgiving Day
- Christmas Day

Paid Holidays

None

Shift Rates

Off shift work commencing between 5:00 P.M. and 11:00 P.M. shall work eight and one half hours allowing for one half hour for lunch. The wage rate shall be 113% of the straight time hourly wage rate.

(Local #1536)

TUNNEL WORKER

Blasters, Mucking Machine Operators (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$54.20

Supplemental Benefit Rate per Hour: \$48.20

Tunnel Workers (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$52.31

Supplemental Benefit Rate per Hour: \$46.59

Top Nipper (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate per Hour: \$51.35
Supplemental Benefit Rate per Hour: \$45.78

Outside Lock Tender, Outside Gauge Tender, Muck Lock Tender (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$50.42
Supplemental Benefit Rate per Hour: \$44.91

Bottom Bell & Top Bell Signal Person: Shaft Person (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$50.42
Supplemental Benefit Rate per Hour: \$44.92

Changehouse Attendant: Powder Watchperson (Compressed Air Rates)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$43.94
Supplemental Benefit Rate per Hour: \$42.55

Blasters (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$51.72
Supplemental Benefit Rate per Hour: \$46.03

Tunnel Workers (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$49.48
Supplemental Benefit Rate per Hour: \$44.06

All Others (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$45.73
Supplemental Benefit Rate per Hour: \$40.75

Microtunneling (Free Air Rates)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$39.58
Supplemental Benefit Rate per Hour: \$35.25

Overtime Description

For Repair-Maintenance Work on Existing Equipment and Facilities - Time and one half the regular rate after a 7 hour day, or for Saturday, or for Sunday. Double time the regular rate for work on a holiday.

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

For Small-Bore Micro Tunneling Machines - Time and one-half the regular rate shall be paid for all overtime.

Overtime

- Double time the regular rate after an 8 hour day.
- Double time the regular time rate for Saturday.
- Double time the regular rate for Sunday.
- Double time the regular rate for work on the following holiday(s).

Paid Holidays

- New Year's Day
- Lincoln's Birthday
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

(Local #147)

WELDER

**TO BE PAID AT THE RATE OF THE JOURNEYPERSON IN THE TRADE
PERFORMING THE WORK.**

OFFICE OF THE COMPTROLLER

CITY OF NEW YORK

220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

APPENDIX

Pursuant to Labor Law §220 (3-e), only apprentices who are individually registered in a bona fide program to which the employer contractor is a participant and registered with the New York State Department of Labor, may be employed on a public work project.

Any employee listed on a payroll at an apprentice wage rate, who is not registered as above, shall be paid the journey person wage rate for the classification of work he actually performed.

Apprentice ratios are established to ensure the proper safety, training and supervision of apprentices. A ratio establishes the number of journey workers required for each apprentice in a program and on a job site. Ratios are interpreted as follows: in the case of a 1:1, 1:4 ratio, there must be one journey worker for the first apprentice, and four additional journey workers for each subsequent apprentice.

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

APPRENTICESHIP SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS
ADDENDUM
EFFECTIVE PERIOD JANUARY 20, 2014 THROUGH JUNE 30, 2014

List of Amended Classifications

1. ASBESTOS HANDLER
2. BRICKLAYER
3. FLOOR COVERER
4. HOUSE WRECKER
5. IRONWORKER – ORNAMENTAL
6. IRON WORKER - STRUCTURAL
7. MASON TENDER
8. PLASTERER
9. PLUMBER

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ASBESTOS HANDLER

(Ratio of Apprentice Journeyperson: 1 to 1, 1 to 3)

Asbestos Handler (First 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 78% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

Asbestos Handler (Second 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

Asbestos Handler (Third 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 83% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

Asbestos Handler (Fourth 1000 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 89% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$15.05
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.45

(Local #78)

BOILERMAKER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Boilermaker (First Year)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$28.75

Effective Period: 1/1/2014 - 6/30/2014
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: \$29.74

Boilermaker (Second Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.33

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$31.40

Boilermaker (Second Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$31.91

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$33.05

Boilermaker (Third Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$33.49

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$34.69

Boilermaker (Third Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$35.05

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 85% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$36.34

Boilermaker (Fourth Year: 1st Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$36.63

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$38.00

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

Boilermaker (Fourth Year: 2nd Six Months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$38.19

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$39.65

(Local #5)

BRICKLAYER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Bricklayer (First 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Second 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Third 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Fourth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Fifth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

Bricklayer (Sixth 750 Hours)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 95% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$16.60
Effective 1/20/2014 – Supplemental Benefits Per Hour: 17.10

(Bricklayer District Council)

CARPENTER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Carpenter (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Carpenter (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

(Carpenters District Council)

CEMENT MASON

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cement Mason (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyman's Rate

Cement Mason (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyman's Rate

Cement Mason (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 70% of Journeyman's Rate

(Local #780)

CEMENT AND CONCRETE WORKER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Cement & Concrete Worker (0 - 500 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 50% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$18.04

Cement & Concrete Worker (501 - 1000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$18.87

Cement & Concrete Worker (1001 - 2000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 65% of Journeyman's rate

Supplemental Benefit Rate Per Hour: \$24.25

Cement & Concrete Worker (2001 - 4000 hours)

Effective Period: 7/1/2013 - 6/30/2014

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Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$25.07

(Cement Concrete Workers District Council)

DERRICKPERSON & RIGGER (STONE)
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Derrickperson & Rigger (stone) - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: 50% of Journeyperson's rate

Derrickperson & Rigger (stone) - Second Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

Derrickperson & Rigger (stone) - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

Derrickperson & Rigger (stone) - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 90% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: 75% of Journeyperson's rate

(Local #197)

DOCKBUILDER/PILE DRIVER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 6)

Dockbuilder/Pile Driver (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate

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\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

Dockbuilder/Pile Driver (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Benefit Rate Per Hour: \$30.29

(Carpenters District Council)

ELECTRICIAN

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Electrician (First Term: 0-6 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$12.50
Supplemental Benefit Rate per Hour: \$10.86
Overtime Supplemental Rate per Hour: \$11.68

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$12.50
Supplemental Benefit Rate per Hour: \$11.10
Overtime Supplemental Rate per Hour: \$11.93

Electrician (First Term: 7-12 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$13.50
Supplemental Benefit Rate per Hour: \$11.37
Overtime Supplemental Rate per Hour: \$12.26

Effective period: 5/14/2014 - 6/30/2014

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Wage Rate per Hour: \$13.50
Supplemental Benefit Rate per Hour: \$11.62
Overtime Supplemental Rate per Hour: \$12.51

Electrician (Second Term: 0-6 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$14.50
Supplemental Benefit Rate per Hour: \$11.88
Overtime Supplemental Rate per Hour: \$12.83

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$14.50
Supplemental Benefit Rate per Hour: \$12.13
Overtime Supplemental Rate per Hour: \$13.08

Electrician (Second Term: 7-12 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$15.50
Supplemental Benefit Rate per Hour: \$12.39
Overtime Supplemental Rate per Hour: \$13.41

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$15.50
Supplemental Benefit Rate per Hour: \$12.64
Overtime Supplemental Rate per Hour: \$13.66

Electrician (Third Term: 0-6 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$16.50
Supplemental Benefit Rate per Hour: \$12.90
Overtime Supplemental Rate per Hour: \$13.98

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$16.50
Supplemental Benefit Rate per Hour: \$13.15
Overtime Supplemental Rate per Hour: \$14.23

Electrician (Third Term: 7-12 Months)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$17.50
Supplemental Benefit Rate per Hour: \$13.40
Overtime Supplemental Rate per Hour: \$14.56

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$17.50
Supplemental Benefit Rate per Hour: \$13.65

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Overtime Supplemental Rate per Hour: \$14.81

Electrician (Fourth Term: 0-6 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$18.50
Supplemental Benefit Rate per Hour: \$13.91
Overtime Supplemental Rate per Hour: \$15.13

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$18.50
Supplemental Benefit Rate per Hour: \$14.16
Overtime Supplemental Rate per Hour: \$15.38

Electrician (Fourth Term: 7-12 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$20.25
Supplemental Benefit Rate per Hour: \$14.80
Overtime Supplemental Rate per Hour: \$16.14

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$20.50
Supplemental Benefit Rate per Hour: \$15.18
Overtime Supplemental Rate per Hour: \$16.53

Electrician (Fifth Term: 0-12 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$22.00
Supplemental Benefit Rate per Hour: \$17.30
Overtime Supplemental Rate per Hour: \$18.68

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$22.50
Supplemental Benefit Rate per Hour: \$18.06
Overtime Supplemental Rate per Hour: \$19.47

Electrician (Fifth Term: 13-18 Months - Hired on or after 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$26.50
Supplemental Benefit Rate per Hour: \$19.56
Overtime Supplemental Rate per Hour: \$21.23

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$27.00
Supplemental Benefit Rate per Hour: \$20.32
Overtime Supplemental Rate per Hour: \$22.01

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Electrician (Fourth Term: 0-6 Months - Hired before 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$22.10
Supplemental Benefit Rate per Hour: \$15.74
Overtime Supplemental Rate per Hour: \$17.20

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$22.10
Supplemental Benefit Rate per Hour: \$15.99
Overtime Supplemental Rate per Hour: \$17.45

Electrician (Fourth Term: 7-12 Months - Hired before 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$23.95
Supplemental Benefit Rate per Hour: \$16.69
Overtime Supplemental Rate per Hour: \$18.26

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$24.20
Supplemental Benefit Rate per Hour: \$17.06
Overtime Supplemental Rate per Hour: \$18.66

Electrician (Fifth Term: 0-18 Months - Hired before 5/10/07)

Effective period: 7/1/2013 - 5/13/2014
Wage Rate per Hour: \$25.80
Supplemental Benefit Rate per Hour: \$19.21
Overtime Supplemental Rate per Hour: \$20.83

Effective period: 5/14/2014 - 6/30/2014
Wage Rate per Hour: \$26.30
Supplemental Benefit Rate per Hour: \$19.96
Overtime Supplemental Rate per Hour: \$21.61

Overtime Description

Overtime Wage paid at time and one half the regular rate
For "A" rated Apprentices (work in excess of 7 hours per day)
For "M" rated Apprentices (work in excess of 8 hours per day)

(Local #3)

ELEVATOR CONSTRUCTOR

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Elevator (Constructor) - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$26.87

Elevator (Constructor) - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$27.92

Elevator (Constructor) - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$29.38

Elevator (Constructor) - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.84

(Local #1)

ELEVATOR REPAIR & MAINTENANCE
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 2)

Elevator Service/Modernization Mechanic (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Benefit Per Hour: \$26.79

Elevator Service/Modernization Mechanic (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Benefit Per Hour: \$27.12

Elevator Service/Modernization Mechanic (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate

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Supplemental Benefit Per Hour: \$28.43

Elevator Service/Modernization Mechanic (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Benefit Per Hour: \$29.74

(Local #1)

ENGINEER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

Engineer - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$22.49
Supplemental Benefit Rate per Hour: \$20.68

Engineer - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$28.11
Supplemental Benefit Rate per Hour: \$20.68

Engineer - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$20.92
Supplemental Benefit Rate per Hour: \$20.68

Engineer - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$33.73
Supplemental Benefit Rate per Hour: \$20.68

(Local #15)

ENGINEER - OPERATING
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 5)

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

Operating Engineer - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour 40% of Journeyperson's Rate
Supplemental Benefit Per Hour: \$18.60

Operating Engineer - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's Rate
Supplemental Benefit Per Hour: \$18.60

Operating Engineer - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's Rate
Supplemental Benefit Per Hour: \$18.60

(Local #14)

FLOOR COVERER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Floor Coverer (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 - Supplemental Benefits Per Hour: 29.55

Floor Coverer (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 - Supplemental Benefits Per Hour: 29.55

Floor Coverer (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 - Supplemental Benefits Per Hour: 29.55

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Floor Coverer (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.75
Effective 1/20/2014 – Supplemental Benefits Per Hour: 29.55

(Carpenters District Council)

GLAZIER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Glazier (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$11.97

Glazier (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$21.13

Glazier (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$23.54

Glazier (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$28.34

(Local #1281)

HEAT & FROST INSULATOR
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

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Heat & Frost Insulator (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 40% of Journeyperson's rate

Heat & Frost Insulator (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Heat & Frost Insulator (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 70% of Journeyperson's rate

Heat & Frost Insulator (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 80% of Journeyperson's rate

(Local #12)

**HOUSE WRECKER
(TOTAL DEMOLITION)
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)**

House Wrecker - First Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$20.36

Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$20.52

Supplemental Benefit Rate per Hour: \$16.60

House Wrecker - Second Year

Effective Period: 7/1/2013 - 1/19/2014

Wage Rate per Hour: \$21.46

Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014

Wage Rate per Hour: \$21.67

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
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Supplemental Benefit Rate per Hour: \$16.60

House Wrecker - Third Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$23.01
Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$23.27
Supplemental Benefit Rate per Hour: \$16.60

House Wrecker - Fourth Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$25.36
Supplemental Benefit Rate per Hour: \$16.35

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$25.83
Supplemental Benefit Rate per Hour: \$16.60

(Local #79)

IRON WORKER - ORNAMENTAL
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Iron Worker (Ornamental) - 1st Four Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$35.78

Iron Worker (Ornamental) 5 - 10 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyman's rate
Supplemental Rate Per Hour: \$36.75

Iron Worker (Ornamental) 11 - 16 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$37.72

Iron Worker (Ornamental) 17 - 22 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$39.66

Iron Worker (Ornamental) 23 - 28 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 85% of Journeyman's rate
Supplemental Rate Per Hour: \$40.63

Iron Worker (Ornamental) 29 - 36 Months - Hired on or Before 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 95% of Journeyman's rate
Supplemental Rate Per Hour: \$42.57

Iron Worker (Ornamental) - 1st Ten Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$33.84
Effective 1/20/2014 – Supplemental Benefits Per Hour: 34.55

Iron Worker (Ornamental) - 11 - 16 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$34.81
Effective 1/20/2014 – Supplemental Benefits Per Hour: 35.55

Iron Worker (Ornamental) - 17 - 22 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$35.78
Effective 1/20/2014 – Supplemental Benefits Per Hour: 36.55

Iron Worker (Ornamental) - 23 - 28 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$37.72
Effective 1/20/2014 – Supplemental Benefits Per Hour: 38.56

Iron Worker (Ornamental) - 29 - 36 Months - Hired After 8/1/08

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: \$39.66

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§220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

Effective 1/20/2014 – Supplemental Benefits Per Hour: 40.56

(Local #580)

IRON WORKER - STRUCTURAL
(Ratio of Apprentice to Journey person: 1 to 1, 1 to 6)

Iron Worker (Structural) - 1st Six Months

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: \$24.48
Supplemental Benefit Rate per Hour: \$43.87

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$24.73
Supplemental Benefit Rate per Hour: \$45.07

Iron Worker (Structural) - 7- 18 Months

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: \$25.08
Supplemental Benefit Rate per Hour: \$43.87

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$25.33
Supplemental Benefit Rate per Hour: \$45.07

Iron Worker (Structural) - 19 - 36 months

Effective Period: 7/1/2013 – 1/19/2014
Wage Rate per Hour: \$25.68
Supplemental Benefit Rate per Hour: \$43.87

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$25.93
Supplemental Benefit Rate per Hour: \$45.07

(Local #40 and #361)

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LABORER (FOUNDATION, CONCRETE, EXCAVATING, STREET PIPE LAYER & COMMON)
(Ratio Apprentice to Journeyman: 1 to 1, 1 to 3)

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - First 1000 hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Second 1000 hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Third 1000 hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

Laborer (Foundation, Concrete, Excavating, Street Pipe Layer & Common) - Fourth 1000 hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 90% of Journeyman's rate
Supplemental Rate Per Hour: \$33.25

(Local #731)

MARBLE MECHANICS
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Cutters & Setters - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

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

Cutters & Setters - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 55% of Journeyperson's rate

Cutters & Setters - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 65% of Journeyperson's rate

Cutters & Setters - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Cutters & Setters - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 85% of Journeyperson's rate

Cutters & Setters - Sixth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 95% of Journeyperson's rate

Polishers & Finishers - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 50% of Journeyperson's rate
NO BENEFITS PAID DURING THE FIRST TWO MONTHS (PROBATIONARY PERIOD)

Polishers & Finishers - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 60% of Journeyperson's rate

Polishers & Finishers - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 75% of Journeyperson's rate

Polishers & Finishers - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 90% of Journeyperson's rate

(Local #7)

MASON TENDER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Mason Tender - First Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$20.63
Supplemental Benefit Rate per Hour: \$17.06

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$20.79
Supplemental Benefit Rate per Hour: \$17.58

Mason Tender - Second Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$21.73
Supplemental Benefit Rate per Hour: \$17.06

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$21.94
Supplemental Benefit Rate per Hour: \$17.58

Mason Tender - Third Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$23.33
Supplemental Benefit Rate per Hour: \$17.06

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$23.59
Supplemental Benefit Rate per Hour: \$17.58

Mason Tender - Fourth Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$25.93
Supplemental Benefit Rate per Hour: \$17.06

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$26.25
Supplemental Benefit Rate per Hour: \$17.58

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\$220 APPRENTICESHIP PREVAILING WAGE SCHEDULE

(Local #79)

METALLIC LATHER
(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Metallic Lather (First Year -Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$28.11
Supplemental Benefit Rate per Hour: \$22.79

Metallic Lather (Second Year - Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$32.71
Supplemental Benefit Rate per Hour: \$24.44

Metallic Lather (Third Year - Called Prior to 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$37.77
Supplemental Benefit Rate per Hour: \$25.59

Metallic Lather (First Year -Called On Or After 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$17.71
Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Second Year - Called On Or After 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$22.81
Supplemental Benefit Rate per Hour: \$19.85

Metallic Lather (Third Year - Called On Or After 6/29/11)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$27.91
Supplemental Benefit Rate per Hour: \$19.85

(Local #46)

MILLWRIGHT

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Millwright (First Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$26.23

Supplemental Benefit Rate per Hour: \$31.51

Millwright (Second Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$31.00

Supplemental Benefit Rate per Hour: \$34.77

Millwright (Third Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$35.77

Supplemental Benefit Rate per Hour: \$39.19

Millwright (Fourth Year)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$45.30

Supplemental Benefit Rate per Hour: \$44.63

(Local #740)

PAVER AND ROADBUILDER

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 3)

Paver and Roadbuilder - First Year (Minimum 1000 hours)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$26.19

Supplemental Benefit Rate per Hour: \$16.20

Paver and Roadbuilder - Second Year (Minimum 1000 hours)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate per Hour: \$27.77
Supplemental Benefit Rate per Hour: \$16.20

(Local #1010)

PAINTER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painter - Brush & Roller - First Year

Effective Period: 7/1/2013 - 4/30/2014
Wage Rate per Hour: \$15.00
Supplemental Benefit Rate per Hour: \$11.38

Effective Period: 5/1/2014 - 6/30/2014
Wage Rate per Hour: \$15.80
Supplemental Benefit Rate per Hour: \$11.88

Painter - Brush & Roller - Second Year

Effective Period: 7/1/2013 - 4/30/2014
Wage Rate per Hour: \$18.75
Supplemental Benefit Rate per Hour: \$15.23

Effective Period: 5/1/2014 - 6/30/2014
Wage Rate per Hour: \$19.75
Supplemental Benefit Rate per Hour: \$15.73

Painter - Brush & Roller - Third Year

Effective Period: 7/1/2013 - 4/30/2014
Wage Rate per Hour: \$22.50
Supplemental Benefit Rate per Hour: \$18.14

Effective Period: 5/1/2014 - 6/30/2014
Wage Rate per Hour: \$23.70
Supplemental Benefit Rate per Hour: \$18.64

Painter - Brush & Roller - Fourth Year

Effective Period: 7/1/2013 - 4/30/2014
Wage Rate per Hour: \$30.00
Supplemental Benefit Rate per Hour: \$23.52

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

Effective Period: 5/1/2014 - 6/30/2014
Wage Rate per Hour: \$31.60
Supplemental Benefit Rate per Hour: \$24.02

(District Council of Painters)

PAINTER - STRUCTURAL STEEL
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Painters - Structural Steel (First Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Painters - Structural Steel (Second Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Painters - Structural Steel (Third Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

(Local #806)

PLASTERER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plasterer - First Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyman's rate
Supplemental Rate Per Hour: \$12.76
Effective 1/20/2014 – Supplemental Benefits Per Hour: 15.76

Plasterer - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 45% of Journeyman's rate
Supplemental Rate Per Hour: \$13.24

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

Effective 1/20/2014 – Supplemental Benefits Per Hour: 16.24

Plasterer - Second Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyman's rate
Supplemental Rate Per Hour: \$15.21
Effective 1/20/2014 – Supplemental Benefits Per Hour: 18.21

Plasterer - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: \$16.29
Effective 1/20/2014 – Supplemental Benefits Per Hour: 19.29

Plasterer - Third Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: \$18.46
Effective 1/20/2014 – Supplemental Benefits Per Hour: 21.46

Plasterer - Third Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyman's rate
Supplemental Rate Per Hour: \$19.54
Effective 1/20/2014 – Supplemental Benefits Per Hour: 22.54

(Local #530)

PLUMBER

(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Plumber - First Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$0.71

Plumber - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$14.00
Supplemental Benefit Rate per Hour: \$2.96

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

Plumber - Second Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$18.26
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$23.67
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Third Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$20.36
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$25.77
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Fourth Year

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$23.21
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$28.62
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Fifth Year: 1st Six Months

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$24.61
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014
Wage Rate per Hour: \$30.02
Supplemental Benefit Rate per Hour: \$11.16

Plumber - Fifth Year: 2nd Six Months

Effective Period: 7/1/2013 - 1/19/2014
Wage Rate per Hour: \$36.68
Supplemental Benefit Rate per Hour: \$16.32

Effective Period: 1/20/2014 - 6/30/2014

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

Wage Rate per Hour: \$42.09
Supplemental Benefit Rate per Hour: \$11.16

(Plumbers Local #1)

**POINTER - WATERPROOFER, CAULKER MECHANIC (EXTERIOR BUILDING
RENOVATION)**
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Pointer - Waterproofer, Caulker Mechanic - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$25.00
Supplemental Benefit Rate per Hour: \$3.64

Pointer - Waterproofer, Caulker Mechanic - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$27.25
Supplemental Benefit Rate per Hour: \$8.59

Pointer - Waterproofer, Caulker Mechanic - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$32.23
Supplemental Benefit Rate per Hour: \$11.34

Pointer - Waterproofer, Caulker Mechanic - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$38.66
Supplemental Benefit Rate per Hour: \$11.34

(Bricklayer District Council)

ROOFER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 2)

Roofer - First Year

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

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 35% of Journeyperson's Rate

Rofer - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 50% of Journeyperson's Rate

Rofer - Third Year

Effective Period: 7/1/2013 - 6/30/2014

Wage and Supplemental Rate Per Hour: 60% of Journeyperson's Rate

Rofer - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014

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: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 30% of Journeyperson's rate
Supplemental Rate Per Hour: \$15.37

Sheet Metal Worker - Second Year

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 35% of Journeyperson's rate
Supplemental Rate Per Hour: \$18.24

Sheet Metal Worker - Third Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$20.06

Sheet Metal Worker - Third Year (2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014

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

Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$21.87

Sheet Metal Worker - Fourth Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$23.69

Sheet Metal Worker - Fourth Year (2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$25.33

Sheet Metal Worker - Fifth Year (1st Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$27.47

Sheet Metal Worker - Fifth Year (2nd Six Months)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$31.23

(Local #28)

SIGN ERECTOR

(Ratio of Apprentice to Journeyperson: 1 to 1, 1 to 4)

Sign Erector - First Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 35% of Journeyperson's rate
Supplemental Rate Per Hour: \$5.96

Sign Erector - First Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$6.75

Sign Erector - Second Year: 1st Six Months

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 45% of Journeyperson's rate
Supplemental Rate Per Hour: \$7.55

Sign Erector - Second Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$8.34

Sign Erector - Third Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 55% of Journeyperson's rate
Supplemental Rate Per Hour: \$9.13

Sign Erector - Third Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyperson's rate
Supplemental Rate Per Hour: \$9.92

Sign Erector - Fourth Year: 1st Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$10.72

Sign Erector - Fourth Year: 2nd Six Months

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyperson's rate
Supplemental Rate Per Hour: \$11.51

Sign Erector - Fifth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 75% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

Sign Erector - Sixth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$12.30

(Local #137)

STEAMFITTER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 3)

Steamfitter - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate and Supplemental Per Hour: 40% of Journeyman's rate

Steamfitter - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate and Supplemental Rate Per Hour: 50% of Journeyman's rate.

Steamfitter - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate and Supplemental Rate per Hour: 65% of Journeyman's rate.

Steamfitter - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate and Supplemental Rate Per Hour: 80% of Journeyman's rate.

Steamfitter - Fifth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate and Supplemental Rate Per Hour: 85% of Journeyman's rate.

(Local #638)

STONE MASON - SETTER
(Ratio Apprentice of Journeyman: 1 to 1, 1 to 2)

Stone Mason - Setters - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 60% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 70% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyman's rate
Supplemental Rate Per Hour: 50% of Journeyman's rate

Stone Mason - Setters - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
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: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 40% of Journeyman's rate

Drywall Taper - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 60% of Journeyman's rate

Drywall Taper - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 80% of Journeyman's rate

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

(Local #1974)

TILE LAYER - SETTER
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 4)

Tile Layer - Setter - First 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 50% of Journeyman's rate

Tile Layer - Setter - Second 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 55% of Journeyman's rate

Tile Layer - Setter - Third 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 65% of Journeyman's rate

Tile Layer - Setter - Fourth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 75% of Journeyman's rate

Tile Layer - Setter - Fifth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 85% of Journeyman's rate

Tile Layer - Setter - Sixth 750 Hours

Effective Period: 7/1/2013 - 6/30/2014
Wage and Supplemental Rate Per Hour: 95% of Journeyman's rate

(Local #7)

TIMBERPERSON
(Ratio of Apprentice to Journeyman: 1 to 1, 1 to 6)

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

Timberperson - First Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 40% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

Timberperson - Second Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 50% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

Timberperson - Third Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 65% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

Timberperson - Fourth Year

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate Per Hour: 80% of Journeyperson's rate
Supplemental Rate Per Hour: \$30.04

(Local #1536)

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

LABOR LAW § 230 PREVAILING WAGE SCHEDULE

Building service employees on public contracts must receive not less than the prevailing rate of wage and supplements for the classification of work performed. In accordance with Labor Law §230 et seq. the Comptroller of the City of New York has promulgated this schedule of prevailing wages and supplemental benefits for building service employees engaged on New York City public building service contracts in excess of \$1,500.00. Prevailing rates are required to be annexed to and form part of the contract pursuant to §231 (4).

Contracting agencies that anticipate doing work that may require building service trades or classifications not included in this schedule may request the Comptroller to establish a proper classification and wage determination for the work. Contractors using trades and/or classifications for which the Comptroller has not promulgated wages and benefits do so at their own risk.

Contractors are advised to review the applicable Comptroller's Prevailing Wage Schedule before bidding on public work. Any Prevailing Wage Rate error made by the Contracting Agency, whether in a contract document or other communication, will not preclude a finding against the contractor of a prevailing-wage violation.

Labor Law § 231 (6) requires contractors to post on the site of the work a current copy of this schedule of wages and supplements.

This schedule is applicable to work performed during the effective period, unless otherwise noted. Changes to this schedule are published on our web site www.comptroller.nyc.gov. Contractors must pay the wages and supplements in effect when the building service employee performs the work. Preliminary schedules for future one-year periods appear in the City Record on or about June 1 each succeeding year. Final schedules appear on or about July 1 in the City Record and on our web site www.comptroller.nyc.gov.

Contractors are solely responsible for maintaining original payroll records delineating, among other things, the hours worked by each employee within a given classification.

Some of the rates in this schedule are based on collective bargaining agreements. The Comptroller's Office has attempted to include all overtime, shift and night differential, Holiday, Saturday, Sunday or other premium time work. However, this schedule does not set forth every prevailing practice with respect to such rates with which employers must comply. All such practices are nevertheless part of the employer's prevailing wage obligation and contained in the collective bargaining agreements of the prevailing wage unions. These collective bargaining agreements are available for inspection by appointment. Requests for appointments may be made by calling (212) 669-4443, Monday through Friday between the hours of 9 a.m. and 5 p.m.

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: Wasył Kinach, P.E., Office of the Comptroller, 1 Centre Street, Room 1122, New York, N.Y. 10007; Fax (212) 669-4002.

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

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

- 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.

Benefits are paid for **EACH HOUR WORKED** unless otherwise noted.

If you are a Covered Building Service Employee and you have been paid less than the Prevailing Wage and Benefits, please contact us at 212-669-4443 or download our complaint form from our website at WWW.COMPTROLLER.NYC.GOV (click on the Bureau of Labor Law).

Si es un empleado de servicios a edificios elegible y recibió menos del sueldo prevalente y beneficios, por favor contáctenos en 212-669-4443 o descarga un formulario de reclamo del sitio del Internet WWW.COMPTROLLER.NYC.GOV (oprime "Oficina de Derecho Laboral").

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

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

230 SCHEDULE OF PREVAILING WAGES AND SUPPLEMENTAL BENEFITS ADDENDUM
EFFECTIVE PERIOD JANUARY 20, 2014 THROUGH JUNE 30, 2014

List of Amended Classifications

1. BUILDING CLEANER AND MAINTAINER (OFFICE)
2. BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)
3. BUILDING HVAC SERVICES OPERATOR
4. WINDOW CLEANER

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

BOILER SERVICEPERSON/TANK CLEANER MECHANIC (LOW PRESSURE)

Boiler Service Person/Tank Cleaner Mechanic (Low Pressure)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$11.37
Supplemental Benefit Rate per Hour: \$5.57

Overtime Description

Work in excess of 8 hours performed on a Sunday or Holiday shall be paid two and one half times the regular rate.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.
Double time the regular rate for work on the following holiday(s).

Paid Holidays

New Year's Day
Martin Luther King Jr. Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day
Employee's Birthday

Vacation

1 year service.....five (5) days
3 years service or more.....ten (10) days
8 years service or more.....fifteen (15) days
13 years service or more.....twenty (20) days

SICK LEAVE:

1-2 years employment.....4 days
2-3 years employment.....5 days
3-4 years employment.....6 days
4-5 years employment.....8 days
6 years or more employment.....10 days

(Local #32 B/J)

BUILDING CLEANER AND MAINTAINER (OFFICE)

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

Office Building Class "A" Handyperson (Over 280,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$25.10
Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$25.55
Supplemental Benefit Rate per Hour: \$9.91
Supplemental Note: for new employee 0-3 months of employment - \$0.00

Office Building Class "A" Foreperson, Starter (Over 280,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$24.99
Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$25.44
Supplemental Benefit Rate per Hour: \$9.91
Supplemental Note: for new employee 0-3 months of employment - \$0.00

Office Building Class "A" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 280,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013
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.

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$23.42
Supplemental Benefit Rate per Hour: \$9.91
Supplemental Note: for new employee 0-3 months of employment - \$0.00; for new employee 4-12 months of employment - \$7.22; for new employee 13-24 months of employment - \$9.58

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 OF THE COMPTROLLER, CITY OF NEW YORK
§230 PREVAILING WAGE SCHEDULE

Office Building Class "B" Handyperson (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$25.07
Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$25.52
Supplemental Benefit Rate per Hour: \$9.91
Supplemental Note: for new employee 0-3 months of employment - \$0.00

Office Building Class "B" Foreperson, Starter (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$24.95
Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$25.40
Supplemental Benefit Rate per Hour: \$9.91
Supplemental Note: for new employee 0-3 months of employment - \$0.00

Office Building Class "B" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Over 120,000 and less than 280,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013
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.

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$23.39
Supplemental Benefit Rate per Hour: \$9.91
Supplemental Note: for new employee 0-3 months of employment - \$0.00; for new employee 4-12 months of employment - \$7.22; for new employee 13-24 months of employment - \$9.58

NEW HIRE: Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director may be paid 75% of the wage rate above for the first 21 months of employment, 85% of the wage rate above for the 22nd through 42nd months of employment, and upon the completion of 42 months of employment employee shall be paid the full wage rate.

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

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" Handyperson (Less than 120,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$25.02

Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$25.47

Supplemental Benefit Rate per Hour: \$9.91

Supplemental Note: for new employee 0-3 months of employment - \$0.00

Office Building Class "C" Foreperson, Starter (Less than 120,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$24.91

Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$25.36

Supplemental Benefit Rate per Hour: \$9.91

Supplemental Note: for new employee 0-3 months of employment - \$0.00

Office Building Class "C" Cleaner/Porter, Elevator Operator, Exterminator, Fire Safety Director (Less than 120,000 square feet gross area)

Effective Period: 7/1/2013 - 12/31/2013

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.

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$23.35

Supplemental Benefit Rate per Hour: \$9.91

Supplemental Note: for new employee 0-3 months of employment - \$0.00; for new employee 4-12 months of employment - \$7.22; for new employee 13-24 months of employment - \$9.58

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

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.

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for work on a holiday plus the day's pay.

Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Good Friday
Memorial Day
Independence Day
Labor Day
Columbus Day
Thanksgiving Day
Day after Thanksgiving
Christmas Day

Vacation

Less than 6 months of work.....no vacation
6 months of work.....three (3) days
1 year of work.....ten (10) days
5 years of work.....fifteen (15) days
15 years of work.....twenty (20) days
21 years of work.....twenty-one (21) days
22 years of work.....twenty-two (22) days
23 years of work.....twenty-three (23) days
24 years of work.....twenty-four (24) days
25 years or more of work.....twenty-five (25) days
Plus two Personal Days per year.

Sick Leave:

10 sick days per year.

Unused sick leave paid in the succeeding January, one full day pay for each unused sick day.

(Local #32 B/J)

BUILDING CLEANER AND MAINTAINER (RESIDENTIAL)

Residential Building Class "A" Handyperson

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

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$23.57

Supplemental Benefit Rate per Hour: \$9.43

Supplemental Note: Effective 1/1/2014 - \$9.83, for new employee 0-3 months of employment - \$0.00

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: 7/1/2013 - 12/31/2013

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.

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$21.34

Supplemental Benefit Rate per Hour: \$9.83

Supplemental Note: for new employee 0-3 months of employment - \$0.00; for new employee 4-12 months of employment - \$7.22; for new employee 13-24 months of employment - \$9.58

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" Handyperson

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$23.51

Supplemental Benefit Rate per Hour: \$9.43

Supplemental Note: Effective 1/1/2014 - \$9.83, for new employee 0-3 months of employment - \$0.00

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.

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

Effective Period: 7/1/2013 - 12/31/2013

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.

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$21.28

Supplemental Benefit Rate per Hour: \$9.83

Supplemental Note: for new employee 0-3 months of employment - \$0.00; for new employee 4-12 months of employment - \$7.22; for new employee 13-24 months of employment - \$9.58

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 "C" Handyperson

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: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$23.45

Supplemental Benefit Rate per Hour: \$9.43

Supplemental Note: Effective 1/1/2014 - \$9.83, for new employee 0-3 months of employment - \$0.00

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: 7/1/2013 - 12/31/2013

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.

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$21.23

Supplemental Benefit Rate per Hour: \$9.83

Supplemental Note: for new employee 0-3 months of employment - \$0.00; for new employee 4-12 months of employment - \$7.22; for new employee 13-24 months of employment - \$9.58

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

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.

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for work on a holiday plus the day's pay.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

- New Year's Day
- Martin Luther King Jr. Day
- President's Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Thanksgiving Day
- Christmas Day

Vacation

- 6 months.....three (3) days
 - 1 year.....ten (10) days
 - 5 years.....fifteen (15) days
 - 15 years.....twenty (20) days
 - 21 years.....twenty-one (21) days
 - 22 years.....twenty-two (22) days
 - 23 years.....twenty-three (23) days
 - 24 years.....twenty-four (24) days
 - 25 years.....twenty-five (25) days
- Plus two Personal Days per year.

SICK LEAVE

After 1 year of service.....ten (10) days per year

(Local #32 B/J)

BUILDING HVAC SERVICES OPERATOR

Engineer (Refrigeration)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$35.18

Supplemental Benefit Rate per Hour: \$15.78

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$36.73

PUBLISH DATE: 1/20/2014

EFFECTIVE PERIOD: JULY 1, 2013 THROUGH JUNE 30, 2014

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

Supplemental Benefit Rate per Hour: \$16.35

Fireperson

Fireperson (Helper): Assist the Engineer

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$27.39

Supplemental Benefit Rate per Hour: \$15.41

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$28.60

Supplemental Benefit Rate per Hour: \$15.97

Please note that the NYC Comptroller's Office does not publish rates for the Stationary Engineer title.

Overtime Description

All hours worked on a holiday shall be paid at two and one half times the regular wage rate in lieu of the paid day off.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Time and one half the regular rate for Sunday.

Paid Holidays

New Year's Day

Memorial Day

Independence Day

Labor Day

Thanksgiving Day

Christmas Day

Plus six (6) floating Holidays

Vacation

6 months	three (3) days
1 year	ten (10) days
5 years	fifteen (15) days
15 years	twenty (20) days
21 years.....	twenty-one (21) days
22 years	twenty-two (22) days
23 years	twenty-three (23) days
24 years	twenty-four (24) days
25 years	twenty-five (25) days

(Local #94)

CLEANER (PARKING GARAGE)

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

Garage Cleaner

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$11.20
Supplemental Benefit Rate per Hour: \$1.72

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

FUEL OIL

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (5th Year and above)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$30.61
Supplemental Benefit Rate per Hour: \$20.42

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (4th Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$28.00
Supplemental Benefit Rate per Hour: \$20.42

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (3rd Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$26.00
Supplemental Benefit Rate per Hour: \$20.42

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (2nd Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$24.00
Supplemental Benefit Rate per Hour: \$20.42

Fuel Oil, Coal, Fuel Gas, Petroleum Product Chauffeur (1st Year)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$22.00
Supplemental Benefit Rate per Hour: \$20.42

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

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular rate for Saturday.
Double time the regular rate for Sunday.

Overtime Holidays

Double time the regular rate for work on the following holiday(s).

- Martin Luther King Jr. Day
- Lincoln's Birthday
- Washington's Birthday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Veteran's Day

Triple time the regular rate for work on the following holiday(s).

- New Year's Day
- Thanksgiving Day
- Christmas Day

Paid Holidays

- New Year's Day
- Martin Luther King Jr. Day
- Lincoln's Birthday
- Washington's Birthday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day

Vacation

Less than 75 days worked.....no vacation.
75 days worked, but less than 110 days worked in a calendar year.....five (5) days the following year.
110 days or more worked in a calendar year.....ten (10) days the following year.

SICK LEAVE:

1 day sick leave earned for each 40 days worked in the preceding calendar year for a maximum of five (5) days per calendar year.

(Local #553)

GARDENER

Gardener

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$17.16
Supplemental Benefit Rate per Hour: \$1.72

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

LOCKSMITH

Locksmith

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$19.63
Supplemental Benefit Rate per Hour: \$6.20

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

MEDICAL WASTE REMOVAL

Driver

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$18.00
Supplemental Benefit Rate per Hour: \$9.34

Helper

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$14.25
Supplemental Benefit Rate per Hour: \$9.34

Tractor Trailer Driver

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

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$20.50
Supplemental Benefit Rate per Hour: \$9.34

Overtime Description

Time and one half the regular hourly rate after an 8 hour day or after 40 hours in any work week. The seventh day of work in a workweek is paid at double time the regular hourly rate. Time and one half the regular hourly rate for work on a holiday plus days pay for below paid holidays.

Paid Holidays

President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Vacation

1 year of service but less than five years.....ten (10) days
5 years of service but less than ten years.....fifteen (15) days
10 years of service.....sixteen (16) days
11 years.....seventeen (17) days
12 years.....eighteen (18) days
13 years.....nineteen (19) days
14 years.....twenty (20) days
20 years.....twenty-one (21) days
21 years.....twenty-two (22) days
22 years.....twenty-three (23) days
23 years.....twenty-four (24) days
24 years.....twenty-five (25) days
Plus 5 Personal Days

(Local #813)

MOVER - OFFICE FURNITURE AND EQUIPMENT

Heavy and Tractor Trailer Truck Driver

Tractor-trailer combination or a truck with a capacity of at least 26,000 pounds Gross Vehicle Weight (GVW)

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$22.57
Supplemental Benefit Rate per Hour: \$4.49

Light Truck Driver

Effective Period: 7/1/2013 - 6/30/2014
Wage Rate per Hour: \$19.81
Supplemental Benefit Rate per Hour: \$4.49

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

Laborer and Freight, Stock, and Material Movers, Hand

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$17.51

Supplemental Benefit Rate per Hour: \$4.49

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

REFUSE REMOVER

Refuse Remover

Effective Period: 7/1/2013 - 6/30/2014

Wage Rate per Hour: \$29.27

Supplemental Benefit Rate per Hour: \$4.49

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular hourly rate after 40 hours in any work week.

(Based on data from NYS Department of Labor Occupational Employment Statistics and US Department of Labor Bureau of Labor Statistics)

SECURITY GUARD (ARMED)

Security Guard (Armed)

Effective Period: 7/1/2013 - 12/31/2013

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

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$28.25

Supplemental Benefit Rate per Hour: \$5.02

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

Supplemental Note: for new employee 0-30 days of employment - \$4.44; for new employee 31-120 days of employment - \$4.61; for new employee 121 days - 2 years of employment - \$4.63

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime Description

A guard who works a holiday is paid the regular rate plus receives the paid holiday.
Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day
Personal Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	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: 7/1/2013 - 12/31/2013

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

Effective Period: 1/1/2014 - 6/30/2014

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

Wage Rate per Hour: \$13.10

Supplemental Benefit Rate per Hour: \$4.63

Supplemental Note: for new employee 0-30 days of employment - \$4.44; for new employee 31-120 days of employment - \$4.61

Security Guard (Unarmed) 7 - 12 months

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$13.35

Supplemental Benefit Rate per Hour: \$4.54

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$13.60

Supplemental Benefit Rate per Hour: \$4.63

Security Guard (Unarmed) 13 - 18 months

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$13.85

Supplemental Benefit Rate per Hour: \$4.54

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$14.10

Supplemental Benefit Rate per Hour: \$4.63

Security Guard (Unarmed) 19 - 24 months

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$14.35

Supplemental Benefit Rate per Hour: \$4.54

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$14.60

Supplemental Benefit Rate per Hour: \$4.63

Security Guard (Unarmed) 25 - 30 months

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$14.85

Supplemental Benefit Rate per Hour: \$4.90

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$15.10

Supplemental Benefit Rate per Hour: \$5.02

Security Guard (Unarmed) 31 months or more

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$15.15

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§230 PREVAILING WAGE SCHEDULE

Supplemental Benefit Rate per Hour: \$4.90

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$15.60

Supplemental Benefit Rate per Hour: \$5.02

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime Description

A guard who works a holiday is paid the regular rate plus receives the paid holiday.
Supplemental Benefits shall be paid for each hour paid, up to forty (40) paid hours per week.

Overtime

Time and one half the regular rate after an 8 hour day.
Time and one half the regular hourly rate after 40 hours in any work week.

Paid Holidays

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day
Personal Day

Vacation

Months on payroll	Vacation with Pay
6	3 days
12	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)

WINDOW CLEANER

Window Cleaner

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$26.44

Supplemental Benefit Rate per Hour: \$9.51

OFFICE OF THE COMPTROLLER, CITY OF NEW YORK
\$230 PREVAILING WAGE SCHEDULE

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$26.90
Supplemental Benefit Rate per Hour: \$9.91

Power Operated Scaffolds, Manual Scaffolds, and Boatswain Chairs

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$28.69
Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$29.27
Supplemental Benefit Rate per Hour: \$9.91

Window Cleaner Apprentice (0 - 3 months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$19.59
Supplemental Benefit Rate per Hour: None

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$19.92
Supplemental Benefit Rate per Hour: None

Window Cleaner Apprentice (4 - 7 months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$21.18
Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$21.54
Supplemental Benefit Rate per Hour: \$9.91

Window Cleaner Apprentice (8 - 11 months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$22.44
Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014
Wage Rate per Hour: \$22.82
Supplemental Benefit Rate per Hour: \$9.91

Window Cleaner Apprentice (12 - 15 months)

Effective Period: 7/1/2013 - 12/31/2013
Wage Rate per Hour: \$23.72

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

Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$24.12

Supplemental Benefit Rate per Hour: \$9.91

Window Cleaner Apprentice (16 - 17 months)

Effective Period: 7/1/2013 - 12/31/2013

Wage Rate per Hour: \$25.01

Supplemental Benefit Rate per Hour: \$9.51

Effective Period: 1/1/2014 - 6/30/2014

Wage Rate per Hour: \$25.44

Supplemental Benefit Rate per Hour: \$9.91

Months of employment shall be defined as an Employee's length of service with the Employer or at the Facility, whichever is greater.

Overtime

Time and one half the regular rate after an 8 hour day.

Time and one half the regular rate for Saturday.

Double time the regular rate for Sunday.

Time and one half the regular rate for work on a holiday plus the day's pay.

Paid Holidays

- New Year's Day
- Martin Luther King Jr. Day
- President's Day
- Good Friday
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day
- Personal Day

Vacation

After 7 months but less than 1 year of service.....	five (5) days
1 year but less than 5 years of service.....	ten (10) days
5 years of service but less than 15 years of service.....	fifteen (15) days
15 years of service but less than 21 years of service.....	twenty (20) days
21 years.....	twenty-one (21) days
22 years.....	twenty-two (22) days
23 years.....	twenty-three (23) days
24 years.....	twenty-four (24) days
25 years or more of service.....	twenty-five (25) days
Plus 1 day per year for medical visit	

SICK LEAVE:

10 days after one year worked. Unused sick days to be paid in cash.

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

(Local #32 B/J)

June 01, 2013



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

**DDC STANDARD GENERAL CONDITIONS
FOR SINGLE CONTRACT PROJECTS**



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

June 01, 2013

No Text



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

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SINGLE CONTRACT PROJECTS
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NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

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NEW YORK CITY DEPARTMENT OF
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Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

SECTION 01 10 00 SUMMARY

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].
- B. Addendum to the General Conditions: These General Conditions include and are supplemented by the Addendum to the General Conditions (the "Addendum"). The Addendum includes the following: (1) schedules referred to in these General Conditions (Schedule A through F), (2) information regarding the applicability of various articles, and (3) amended articles, if any.

1.2 SUMMARY:

- A. This section includes the following:
 - 1. Scope and Intent
 - 2. Provisions Referenced in the Contract
 - 3. Performance of Work During Non-Regular Work Hours (Pursuant to a Change Order)
 - 4. Interruption of Services at Existing Facilities

1.3 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.4 SCOPE AND INTENT:

- A. Description of Project: Refer to the Addendum for a description of the project.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 1.4 B

- B. LEED: The City of New York will seek U.S. Green Building Council (USGBC) LEED (Leadership in Energy and Environmental Design) certification for this Project as specified in Section 01 81 13, "SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS" and the Addendum to the General Conditions.



REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 1.4 C

- C. **COMMISSIONING:** The project will be commissioned by an independent third party under separate contract with the City of New York. Commissioning shall be in accordance with ASHRAE and USGBC LEED procedures, as described in Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS, and the Addendum to the General Conditions. The Contractor shall cooperate with the commissioning agent and provide whatever assistance is required.
- D. **PROGRESS SCHEDULE:** Refer to Section 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION for requirements of the project.
- E. **COMPLETION OF WORK:** Work to be done under the Contract is comprised of the furnishing of all labor, materials, equipment and other appurtenances, and obtaining all regulatory agency approvals necessary and required to complete the construction work in accordance with the Contract.
- F. **OMISSION OF DETAILS:** All work called for in the Specifications applicable to the Contract but not shown on the Contract Drawings in their present form, or vice versa, is required, and shall be performed by the Contractor as though it were originally delineated or described. The cost of such work shall be deemed included in the total Contract Price.
- G. **WORK NOT IN SPECIFICATIONS OR CONTRACT DRAWINGS:** Work not particularly specified in the Specifications nor detailed on the Contract Drawings but involved in carrying out their intent or in the complete and proper execution of the work, is required, and shall be performed by the Contractor. The cost of such work shall be deemed included in the total Contract Price.
- H. **SILENCE OF THE SPECIFICATIONS:** The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best practice is to prevail and that only the best material and workmanship is to be used and interpretation of the Specifications shall be made upon that basis.
- I. **CONFLICT BETWEEN CONTRACT DRAWINGS AND SPECIFICATIONS:** 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 before the submission of the bid as to what shall govern.

1.5 CONTRACT DRAWINGS AND SPECIFICATIONS:

- A. **SCHEDULE C -** The Contract Drawings are listed in Schedule C, which is set forth in the Addendum. Such drawings referred to in the Contract, and in the applicable Specifications for the Contract, bear the general title:

City of New York
Department of Design and Construction
Division of Public Buildings
- B. **DOCUMENTS FURNISHED TO THE CONTRACTOR -** After the award of the Contract, the Contractor will be furnished with five (5) complete sets of paper prints of all Contract Drawings mentioned in Paragraph A above, as well as a copy of the Specifications.
- C. **ADDITIONAL COPIES** of Drawings and Specifications, when requested, will be furnished to the Contractor if available.



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DESIGN + CONSTRUCTION

- D. SUPPLEMENTARY DRAWINGS - When, in the opinion of the Commissioner, it becomes necessary to more fully explain the work to be done, or to illustrate the work further, or to show any changes which may be required, drawings known as Supplementary Drawings will be prepared by the Commissioner.
- E. COMPENSATION - Where Supplementary Drawings entail extra work, compensation therefore to the Contractor shall be subject to the terms of the Contract. The Supplementary Drawings shall be binding upon the Contractor with the same force as the Contract Drawings.
- F. SUPPLEMENTARY DRAWING PRINTS - Three (3) copies of prints of these Supplementary Drawings will be furnished to the Contractor.
- G. COPIES TO SUBCONTRACTORS - The Contractor shall furnish each of its subcontractors and material suppliers such copies of Contract Drawings, Supplementary Drawings, or copies of the Specifications as may be required for its work.

1.6 COORDINATION:

- A. COORDINATION AND COOPERATION - The Contractor shall consult and study the requirements of the Contract Drawings and Specifications for all required work, including all work to be performed by trade subcontractors, so that the Contractor may become acquainted with the work of the project as a whole in order to achieve the proper coordination and cooperation necessary for the efficient and timely performance of the work.
- B. CONTRACTOR TO CHECK DRAWINGS: - The Contractor shall verify all dimensions, quantities and details shown on the Contract Drawings, Schedules, or other data received from the Commissioner, and shall notify the Commissioner of all errors, omissions, conflicts and discrepancies found therein. Notice of such errors shall be given before the Contractor proceeds with any work. Figures shall be used in preference to scale dimensions and large-scale drawings in preference to small-scale drawings.

1.7 SHOP DRAWINGS AND RECORD DRAWINGS:

Refer to Division I Section 01 33 00 – SUBMITAL PROCEDURES and Section 01 78 39 – PROJECT RECORD DRAWINGS for requirements applicable to shop drawings and record drawings.

1.8 TEMPORARY FACILITIES, SERVICES AND CONTROLS:

Refer to Division I Section 01 50 00 – TEMPORARY FACILITIES SERVICES AND CONTROLS for the responsibilities of the Contractor.

1.9 DUST CONTROL:

The Contractor shall prepare, execute and manage a "Dust Control Plan" for the prevention of the emission of dust from construction related activities in compliance with 15 RCNY 13-01 et. seq.

1.10 PROVISIONS REFERENCED IN THE CONTRACT:

- A. SCHEDULE A - Various Articles of the Contract refer to requirements set forth in Schedule A of the General Conditions. Schedule A, which is included in the Addendum, sets forth (1) the referenced Articles of the Contract, and (2) the specific requirements applicable to the Contract.



- B. EXTENSION OF TIME - Applications for Extensions of Time, as indicated in Article 13 of the Contract, shall be made in accordance with the Rules of the Procurement Policy Board.
- C. PARTIAL PAYMENTS FOR MATERIALS IN ADVANCE OF THEIR INCORPORATION IN THE WORK PURSUANT TO ARTICLE 42 OF THE CONTRACT – In order to better insure the availability of materials, fixtures and equipment when needed for the work, the Commissioner may authorize partial payment for certain materials, fixtures and equipment, prior to their incorporation in the work, but only in strict accordance with, and subject to, all the terms and conditions set forth in the Specifications, unless an alternate method of payment is elsewhere provided in the Specifications for specified materials, fixtures or equipment.
1. The Contractor shall submit to the Commissioner a written request, in quadruplicate, for payment for materials purchased or to be purchased for which the Contractor needs to be paid prior to their actual incorporation in the work. The request shall be accompanied by a schedule of the types and quantities of materials, and shall state whether such materials are to be stored on or off the site.
 2. Where the materials are to be stored off the site, they shall be stored at a place other than the Contractor's premises (except with the written consent of the Commissioner) and under the conditions prescribed or approved by the Commissioner. The Contractor shall set apart and separately store at the place or places of storage all materials and shall clearly mark same "PROPERTY OF THE CITY OF NEW YORK", and further, shall not at any time move any of said materials to another off-site place of storage without the prior written consent of the Commissioner. Materials may be removed from their place of storage off the site for incorporation in the work upon approval of the Resident Engineer.
 3. Where the materials are to be stored at the site, they shall be stored at such locations as shall be designated by the Resident Engineer and only in such quantities as, in the opinion of the Resident Engineer, will not interfere with the proper performance of the work by the Contractor or by other Contractors then engaged in performing work on the site. Such materials shall not be removed from their place of storage on the site except for incorporation in the work, without the approval of the Resident Engineer.
 4. INSURANCE
 - a. STORAGE OFF-SITE – Where the materials are stored off the site and until such time as they are incorporated in the work, the Contractor shall fully insure such materials against any and all risks of destruction, damage or loss including but not limited to fire, theft, and any other casualty or happening. The policy of insurance shall be payable to the City of New York. It shall be in such terms and amounts as shall be approved by the Commissioner and shall be placed with a company duly licensed to do business in the State of New York. The Contractor shall deliver the original and one (1) copy of such policy or policies marked "Fully Paid" to the Commissioner.
 - b. STORAGE ON THE SITE – Where the materials are stored at the site, the Contractor shall furnish satisfactory evidence to the Commissioner that they are properly insured against loss, by endorsements or otherwise, under the policy or policies of insurance obtained by the Contractor to cover losses to materials owned or installed by the Contractor. The policy of insurance shall cover fire and extended coverage against windstorm, hail, explosion and riot attending a strike, civil commotion, aircraft, vehicles and smoke.
 5. All costs, charges and expenses arising out of the storage of such materials, shall be paid by the Contractor and the City hereby reserves the right to retain out of any partial or final payment made under the Contract an amount sufficient to cover such costs, charges and expenses with the understanding that the City shall have and may exercise any and all other remedies at law for the recovery of such cost, charges and expenses. There shall be no



- increase in the Contract price for such costs, charges and expenses and the Contractor shall not make any claim or demand for compensation therefore.
6. The Contractor shall pay any and all costs of handling and delivery of materials, to the place of storage and from the place of storage to the site of the work; and the City shall have the right to retain from any partial or final payment an amount sufficient to cover the cost of such handling and delivery.
 7. In the event that the whole or any part of these materials are lost, damaged or destroyed in advance of their satisfactory incorporation in the work, the Contractor, at the Contractor's own cost, shall replace such lost, damaged or destroyed materials of the same character and quality. The City will reimburse the Contractor for the cost of the replaced materials to the extent, and only to the extent, of the funds actually received by the City under the policies of insurance hereinbefore referred to. Until such time as the materials are replaced, the City will deduct from the value of the stored materials or from any other money due under the Contract, the amount paid to the Contractor for such lost, damaged or destroyed materials.
 8. Should any of the materials paid for the City hereunder be subsequently rejected or incorporated in the work in a manner or by a method not in accordance with the Contract Documents, the Contractor shall remove and replace, at Contractor's own cost, such defective or improperly incorporated material with materials complying with the Contract Documents. Until such materials are replaced, the City will deduct from the value of the stored materials or from any other money due the Contractor, the amount paid by the City for such rejected or improperly incorporated materials.
 9. Payments for the cost of materials made hereunder shall not be deemed to be an acceptance of such materials as being in accordance with the Contract Documents, and the Contractor always retains and must comply with the Contractor's duty to deliver to the site and properly incorporate in the work only materials which comply with the Contract Documents.
 10. The Contractor shall retain any and all risks in connection with the damage, destruction or loss of the materials paid for hereunder to the time of delivery of the same to the site of the work and their proper incorporation in the work in accordance with the Contract Documents.
 11. The Contractor shall comply with all laws and the regulations of any governmental body or agency pertaining to the priority purchase, allocation and use of the materials.
 12. When requesting payment for such materials, the Contractor shall submit with the partial estimate duly authenticated documents of title, such as bills of sale, invoices or warehouse receipts, all in quadruplicate. The executed bills of sale shall transfer title to the materials from the Contractor to the City. (In the event that the invoices state that the material has been purchased by a subcontractor, bills of sale in quadruplicate will also be required transferring title to the materials from subcontractor to the Contractor).
 13. Where the Contractor, with the approval of the Commissioner, has purchased unusually large quantities of materials in order to assure their availability for the work, the Commissioner, at the Commissioner's option, may waive the requirements of Paragraph 12 provided the Contractor furnishes evidence in the form of an affidavit from the Contractor in quadruplicate, and such other proof as the Commissioner may require, that the Contractor is the sole owner of such materials and has purchased them free and clear of all liens and other encumbrances. In such event, the Contractor shall pay for such materials and submit proof thereof, in the same manner as provided in Paragraph 12 hereof, within seven (7) days after receipt of payment therefore from the Comptroller. Failure on the part of the Contractor to submit satisfactory evidence that all such materials have been paid for in full, shall preclude the Contractor from payments under the Contract.



14. The Contractor shall include in each succeeding partial estimate requisition a summary of materials stored which shall set forth the quantity and value of materials in storage, on or off the site, at the end of each preceding estimate period; the amount removed for incorporation in the work; the quantity and value of materials delivered during the current period and the total value of materials on hand for which payment thereof will be included in the current payment estimate.
15. Upon proof to the satisfaction of the Commissioner of the actual cost of such materials and upon submission of proper proof of title as required under Paragraph 12 or Paragraph 13 hereof, payment will be made therefore to the extent of 85%, provided however, that the cost so verified, established and approved shall not exceed the estimated cost of such materials included in the approved detailed breakdown estimate submitted in accordance with Article 41 of the Contract; if it does, the City will pay only 85% approved estimated cost.
16. Upon the incorporation in the work of any such materials, which have been paid for in advance of such incorporation in accordance with the foregoing provisions, payment will be made for such materials incorporated in the work pursuant to Article 42 of the Contract, less any sums paid pursuant to Paragraph 15 herein.

D. MOBILIZATION PAYMENT – A line item for mobilization shall be allowed on the Contractor's Detailed Bid Breakdown submitted in accordance with Article 41 of the Contract. The Mobilization Payment is intended to include the cost of required bonds, insurance coverage and/or any other expenses required for the initiation of the Contract Work. All costs for mobilization shall be deemed included in the total Contract Price. The Detailed Bid Breakdown shall reflect, and the Mobilization Payment shall be made, in accordance with the following schedule:

Contract Amount	Percent	Mobilization
Less than - \$ 50,000	x 0	= 0
\$ 50,000 - \$ 100,000	x	= \$ 6,000
\$ 100,001 - \$ 500,000	x 6	= \$ 6,000 (min) - \$ 30,000 (max)
\$ 500,000 - \$ 2,500,000	x 5	= \$ 30,000 (min) - \$ 125,000 (max)
Over - \$ 2,500,000	x 4	= \$ 125,000 (min) - \$ 300,000 (max)

The Contractor may requisition for one-half (1/2) of the Mobilization Payment upon satisfactory completion of the following:

1. Installation of any required field office(s).
2. Submission of all required insurance certificates and bonds.
3. Approval by the Department of Design and Construction of the coordinated progress schedule for the project and the Contractor's Shop Drawing schedule.

The remaining balance of the Mobilization Payment may be requisitioned only after 10 percent (10%) of the Contract price, exclusive of the total amount of Mobilization Payments made or to be made hereunder, shall have been approved for payment.

E. ULTRA LOW SULFUR DIESEL FUEL AND BEST AVAILABLE TECHNOLOGY REPORTING: The Contractor shall submit reports to the Commissioner regarding the use of Ultra Low Sulfur Diesel Fuel in Non-Road Vehicles, and the implementation of Best Available Technology (BAT), as set forth in Article 5.4 of the Contract. Such reports shall be submitted in accordance with the schedule, format, directions and procedures established by the Commissioner.



1.11 PERFORMANCE OF WORK DURING NON-REGULAR WORK HOURS:

- A. **NON-REGULAR WORK HOURS:** The Commissioner may issue a change order in accordance with Article 25 of the Contract which (1) directs the Contractor to perform the Work, or specific components thereof, during other than regular work hours (i.e., evenings, weekends and holidays), and (2) provides compensation to the Contractor for costs in connection with the performance of Work during other than regular work hours. The Commissioner may issue a change order if a delay has occurred and such delay is not the fault of the Contractor, or if the work is of such an important nature that delay in completing such work would result in serious disadvantage to the public.
- B. **PROCEDURE:** The Contractor shall (1) obtain whatever permits may be required for performance of the work during other than regular business hours, and (2) pay all necessary fees in connection with such permits. In addition, if directed by the Commissioner, the Contractor shall make immediate application to the Commissioner of the Department of Labor, State of New York, for dispensation in accordance with Subdivision 2 of Section 220 of the Labor Law.

1.12 INTERRUPTION OF SERVICES AT EXISTING FACILITIES:

- A. **EVENING AND WEEKEND WORK** - Where performance of the Work requires the temporary shutdown(s) of services, such shutdown(s) shall be made at night or on weekends or at such times that will cause no interference with the established routines and operations of the facility in question.
- 1 Where weekend or evening work is required due to unavoidable service shutdowns, such work shall be performed at no extra cost to the City. Components of the Work that must be performed during other than regular work hours are indicated in the Drawings and/or the Specifications.
- B. **INTERRUPTION OF EXISTING FACILITIES:**
- 1 The Contractor shall not interrupt any of the services of the facility nor interfere with such services in any way without the permission of the Commissioner. Such interruption or interferences shall be made as brief as possible, and only at such time stated.
 - 2 Under no circumstances shall the Contractor, its subcontractors, or its workers, be permitted to use any part of the project as a shop, without the permission of the Commissioner.
 - 3 Unnecessary noise shall be avoided at all times and necessary noise shall be reduced to a minimum.
 - 4 Toilet facilities, water and electricity must be operational at all times (i.e. 24/7). No services of the facility can be interrupted in any way without the permission of the Commissioner. Careful coordination of all work with the Resident Engineer must be done to maintain the operational level of the project personnel at the facility.
 - 5 The Contractor shall schedule the work to avoid noise interference that will affect the normal functions of the facility. In particular, construction operations producing noises that are objectionable to the functions of the facility must be scheduled at times of day or night, day of the week, or weekend, which will not interfere with personnel at the facility. Any additional cost resulting from this scheduling shall be borne by the Contractor.



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- 6 The Contractor shall arrange to work continuously, including evening and weekend hours, if required, to assure that services will be shut down only during the time actually required to make the necessary connections to the existing facility.
- 7 The Contractor shall give ample written notice in advance to the Commissioner and personnel at the facility of any required shutdown.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 10 00



NEW YORK CITY DEPARTMENT OF
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SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].
- B. LEED: Refer to the Addendum to identify whether this project is designed to comply with a Certification Level according to the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Rating System, as specified in Section 01 81 13, "SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS."
- C. COMMISSIONING: Refer to the Addendum to identify whether this project will be commissioned by an independent third party under separate contract with the City of New York. Commissioning shall be in accordance with ASHRAE and USGBC LEED-NC procedures, as described in Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS. The Contractor shall cooperate with the commissioning agent and provide whatever assistance is required.

1.2 SUMMARY:

- A. This Section includes administrative provisions for coordinating construction operations on the Project including without limitation the following.
 - 1. Coordination Drawings.
 - 2. Administrative and supervisory personnel.
 - 3. Project meetings.
 - 4. Requests for Interpretation (RFIs).
- B. This section includes the following:
 - 1. Definitions
 - 2. Coordination
 - 3. Submittals
 - 4. Administrative and Supervisory Personnel
 - 5. Project Meetings
 - 6. Requests for Interpretation (RFI's)
 - 7. Correspondence
 - 8. Contractor's Daily Reports
 - 9. Alternate and Substitute Equipment
- C. RELATED SECTIONS: include without limitation the following:
 - 1. Section 01 10 00 SUMMARY
 - 2. Section 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION
 - 3. Section 01 33 00 SUBMITTALS
 - 4. Section 01 35 26 SAFETY REQUIREMENTS
 - 5. Section 01 73 00 EXECUTION REQUIREMENTS
 - 6. Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

7. Section 01 77 00 PROJECT CLOSEOUT PROCEDURES

1.3 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.4 COORDINATION:

- A. Coordination: The Contractor shall coordinate its construction operations, including those of its subcontractors, with other entities to ensure the efficient and orderly installation of each part of the Work. The Contractor shall coordinate the various operations required by different Sections of the Specifications that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence in order to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. The Contractor shall prepare memoranda for distribution to its subcontractors and other involved entities, outlining special procedures required for coordination. Such memoranda shall include required notices, reports, and meeting minutes as applicable.
- C. Administrative Procedures: The Contractor shall coordinate scheduling and timing of required administrative procedures with other construction activities and activities of its subcontractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include without limitation the following:
 - 1. Preparation of Contractor's Construction Schedule.
 - 2. Installation and removal of temporary facilities and controls.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Pre-installation conferences..
 - 6. Startup and adjustment of systems.
 - 7. Project closeout activities.
- D. Conservation: The Contractor shall coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.



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- E. Salvaged Items, Material and/or Equipment: The Specifications may identify certain items, materials or equipment which must be salvaged by the Contractor and handled or disposed of as directed. The Contractor shall comply with all directions in the Specifications regarding the salvaging and handling of identified items, material or equipment.

1.5 SUBMITTALS:

- A. Submit shop drawings, product data, samples etc. in compliance with Section 01 33 00, SUBMITTAL PROCEDURES.
- B. Coordination Drawings: The Contractor shall prepare applicable Coordination Drawings in compliance with the requirements for Coordination Drawings in Section 01 33 00, SUBMITTAL PROCEDURES.
- C. Safety Plan in compliance with Section 01 35 26, SAFETY REQUIREMENTS PROCEDURES.
- D. Waste Management Plan in compliance with Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
- E. Key Personnel Names: Within 15 days after the Notice to Proceed, the Contractor shall submit a list of key personnel assignments of the Contractor and its subcontractors, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in case of the absence of individuals assigned to Project.
1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.
 2. In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work. Include special personnel required for coordinating all operations by its subcontractors.

1.6 PROJECT MEETINGS:

- A. General: The Resident Engineer will hold regularly scheduled construction progress meetings at the site, at which time the Contractor and appropriate subcontractors shall have their representatives present to discuss all details relative to the execution of the work. The Resident Engineer shall preside over these meetings.
1. Agenda: Prior to each meeting, the Resident Engineer will consult with the Contractor and will prepare an agenda of items to be discussed. In general, after informal discussion of any item on the agenda, the Resident Engineer will summarize the discussion in a brief written statement, and the Contractor will then dictate a brief statement for the record.
 2. Coordination: In addition to construction progress meetings called by the Resident Engineer, the Contractor shall hold regularly scheduled meetings for the purpose of coordinating; expediting and scheduling the work in accordance with the master coordinated Job Progress Chart. The Contractor and its subcontractors, material suppliers or vendors whose presence is necessary, are required to attend. These meetings may, at the discretion of the Contractor, be held at the same place and immediately following the project meetings held by the Resident Engineer. Minutes of these meetings shall be recorded, typed and printed by the Contractor and distributed to all parties concerned.
- B. PRECONSTRUCTION KICK-OFF MEETING:
1. The Resident Engineer will schedule a preconstruction kick-off meeting either at DDC's main office or at the Project site to review responsibilities and personnel assignments and clarify the



- role of each participant. Unless otherwise directed the Design Consultant will record and distribute meeting minutes.
2. Attendees: Authorized representative of the Client Agency; Design Consultant; the Contractor and its superintendents, subcontractor(s) and their superintendent(s); LEED sub-consultant and Commissioning Authority /Agent (CxA) as applicable and other concerned parties. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Contract Work.
 3. Agenda: Includes without limitation the following as applicable:
 - a. Establishing construction schedule
 - b. Schedule for regular construction meetings
 - c. Phasing
 - d. Critical work sequencing and long-lead items
 - e. Designation of key personnel and their duties
 - f. Reviewing Application for Payment and Change Order Procedures
 - g. Procedures for Requests for Information (RFIs.)
 - h. Review Permits and Approval requirements
 - i. Review all recent Administrative Code reporting requirements relating to the project, (i.e. LL 77, LL86 etc.)
 - j. Procedures for testing and inspecting
 - k. Reviewing special conditions at the Project site
 - l. Distribution of the Contract Documents
 - m. Submittal procedures
 - n. Safety Procedures
 - o. LEED requirements
 - p. Commissioning Requirements
 - q. Preparation of Record Documents
 - r. Historic Treatment requirements
 - s. Use of the premises
 - t. Work restrictions
 - u. Client Agency occupancy requirements
 - v. Responsibility for temporary facilities, services and controls
 - w. Construction Waste Management and Disposal
 - x. Indoor Air Quality Management Plan
 - y. Dust Mitigation Plan
 - z. Office, work, and storage areas
 - aa. Equipment deliveries and priorities
 - bb. Security
 - cc. Progress cleaning
 - dd. Working hours



C. CONSTRUCTION PROGRESS MEETINGS:

1. The Resident Engineer will schedule and conduct construction progress meetings at bi-weekly intervals or as otherwise determined. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work. Unless otherwise directed the Design Consultant will record and distribute meeting minutes.
2. Attendees:
 - a. Design Consultant and applicable sub-consultants
 - b. Client Agency Representative
 - c. Representatives from the Contractor, sub-contractor(s), suppliers or other entities involved in the current progress, planning, coordination or future activities of the Work
 - d. Other appropriate DDC personnel, DDC consultants and concerned parties
3. Agenda: Includes without limitation the following:
 - a. Review the Construction Schedule and progress of the Work. Determine if the Work is on time, ahead of schedule or behind schedule. Determine actions to be taken to maintain or accelerate the schedule
 - b. Review and approve prior meeting minutes and follow up open issues
 - c. Coordinate work between each subcontractor
 - d. Sequence of Operations
 - e. Status of submittals, deliveries and off-site fabrication
 - f. Status of inspections and approvals by governing agencies
 - g. Temporary facilities and controls
 - h. Review Site Safety
 - i. Quality and work standards
 - j. Field observations
 - k. Status of correction of deficient items
 - l. RFI's
 - m. Pending changes
 - n. Status of outstanding Payments and Change Orders
 - o. LEED requirements including Construction Waste Management, Indoor Air Quality Plan, Dust Mitigation and Commissioning
 - p. Status of Administrative Code reporting requirements related to the project.

1.7 REQUESTS FOR INFORMATION (RFI):

- A. Procedure: Immediately on discovery of the need for information or interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, the Contractor shall prepare and submit an RFI in the form specified by the Resident Engineer.
 1. RFI shall originate with the Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFI in a prompt manner to the Resident Engineer so as to avoid delays in Contractor's work or work of its subcontractors.
 3. RFI Log: The Contractor shall prepare, maintain, and submit a tabular log of RFIs organized by the RFI number monthly to the Resident Engineer.



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4. On receipt of responses and action to the RFI, the Contractor shall update the RFI log and immediately distribute the RFI response to affected parties. Review response(s) and notify the Resident Engineer immediately if the Contractor disagrees with response(s).

1.8 CORRESPONDENCE:

Copies of all correspondence to DDC shall be sent directly to the Resident Engineer at the job site.

1.9 CONTRACTOR'S DAILY REPORTS:

The Contractor shall prepare and submit Daily Construction Progress Reports as outlined in Section 01 32 00, CONSTRUCTION PROGRESS DOCUMENTATION.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 31 00



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SECTION 01 32 00
CONSTRUCTION PROGRESS DOCUMENTATION

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for establishing an effective base line schedule for the project and documenting the progress of construction during performance of the Work by developing, revising as necessary, various documents including but not limited to the following:
1. Baseline Construction Schedule.
 2. Composite Schedule for entire project
 3. Recovery Composite Schedule
 4. Revised and/or updated Composite Schedule
 5. Submittals Schedule.
 6. Daily construction reports.
 7. Material location reports.
 8. Field condition reports.
 9. Special reports.
- B. RELATED SECTIONS: include without limitation the following:
1. Section 01 10 00 SUMMARY
 2. Section 01 32 22 PHOTOGRAPHIC DOCUMENTATION
 3. Section 01 33 00 SUBMITTAL PROCEDURES
 4. Section 01 40 00 QUALITY REQUIREMENTS

1.3 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.



- C. **Baseline Construction Schedule:**
A horizontal bar chart type schedule (Microsoft Project OR similar program) listing all the activities and their duration for entire contract duration OR construction period, including logical ties and interrelations between the activities necessary for the timely and successful completion of the project. Critical path activities shall be clearly marked. The Baseline construction schedule is a preliminary schedule that must be reviewed and approved by the Resident Engineer.
- D. **Composite Schedule:**
A composite horizontal bar chart type schedule (Microsoft Project OR similar program) listing all activities to be performed by the Contractor and its subcontractors, the duration of each activity including logical ties and interrelations between activities, and the sequence of each of necessary activities for the timely and successful completion of the project within the stipulated contract duration. Critical path activities shall be clearly marked. The Composite schedule must be signed and submitted by the Contractor within thirty (30) calendar days after the date established for commencement of the Contract, unless otherwise directed. The Composite Schedule must be reviewed and approved by the Resident Engineer.
- E. **Recovery Composite Schedule:** A Recovery Composite Schedule is not required unless the City issues an Acceleration Change Order.

A Composite Schedule outlining and incorporating extraordinary efforts required to recover lost time with the aim of achieving completion of the project within the stipulated contract duration, plus authorized time extensions. In such case special attention must be given to keep the delays as minimum as possible and must establish the nature of efforts such as extended hours of work, weekend work, accelerated fabrication, required action(s) or effort(s) by the Contractor, its subcontractors, consultants, clients, end users and/or other concerned parties.

Such schedule must be prepared and submitted within Five (5) calendar days of request by the Resident Engineer. The Recovery Composite Schedule must be reviewed and approved by the Resident Engineer.
- F. **Revised and/or Updated Composite Schedule:**

A Baseline construction schedule OR Composite Schedule OR Recovery Composite Schedule for the project that shows the actual duration of all the completed activities, including duration of and the reasons for delays, if any has occurred, AND revisions to all remaining activities of the Contractor and its subcontractors, including changes, if any, to logical ties, interrelations and the sequence of each of the outlined activities. Any such revisions should be shown on the row just below the approved schedule of the respective activity so that revisions can be compared.

The Revised and/or updated Composite Schedule must be reviewed and approved by the Resident Engineer.
- G. **Activity:** A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
- H. **Event:** The starting or ending point of an activity.
- I. **Fragment:** A part of the activity that breaks down activities into smaller activities for greater detail.
- J. **Milestone:** A key or critical point in time for reference or measurement.
- K. **Network Diagram:** A graphic diagram of a network schedule, showing activities and activity relationships.



PART II – PRODUCTS

2.1 BASELINE CONSTRUCTION SCHEDULE:

- A. The Contractor shall prepare a Baseline horizontal bar-chart-type construction schedule for the project. Submit the Baseline Construction Schedule to the Resident Engineer within (15) fifteen calendar days after the date established for commencement of the Contract, unless directed otherwise. The Baseline Schedule must be reviewed and approved by the Resident Engineer.
1. Provide a separate time bar for each significant construction activity. Coordinate each activity on the schedule with other construction activities for proper interrelationship & sequence.
 2. Duration: The duration of each activity on the schedule besides installation must clearly show required duration of filing for permits, inspections, testing, approvals, shop drawings and materials submittals and approvals, fabrication, delivery, phasing for each construction activity.
 3. Schedule shall be time-scaled in not more than weekly increments, with the dates of the first day (Monday) of each week indicated.
 4. Completion of all the project activities shall be indicated in advance of the date established for completion of the Contract, allowing time for required inspection and punch list work.
 5. Clearly show time bar for all the tasks, to be completed before start of physical work of scheduled activities, including but not limited to obtaining required permit, subcontractor approval, submission and approval of shop drawings, field verification, time for fabrication and delivery, testing of materials and/or samples, preparation and approval of mock-up sample, curing, pre-testing of soil, pre-testing of equipment - including start up, testing & adjusting, filing for inspection by regulatory agencies, training, final use, etc. required to maintain orderly progress of the activity. A special consideration must be given to those activities requiring early approvals because of long lead-time for manufacture or fabrication.
 6. Phasing: Arrange all activities in proper sequence to reflect requirements for phased completion, work by other entities, work by the City, City furnished items, coordination with existing work, limitations arising due to continued occupancies, non-interruptible services, partial completion for occupancy, site restrictions, provisions for future work, seasonal variations, environmental control, and similar conditions of the project.
 7. Arrange all activities and/or show interrelationship and logical sequence of all activities, determine and mark all critical path activities including any phasing reflecting actual project condition.
 8. Keep at least two blank horizontal bars between all activities for recording actual progress and submitting Revised Schedule as defined in Sub-Section 1.3 G
 9. If necessary a new revised schedule shall be prepared in the same manner as outlined above.

2.2 COMPOSITE SCHEDULE FOR THE PROJECT:

- A. The Contractor shall prepare a Composite Schedule based on the approved Baseline Schedule Such schedule shall indicate graphically and chronologically the start and completion of each and every activity, including all the pre-activity and post activity tasks. Keep at least two blank horizontal bars between all activities for recording actual progress and/or revisions.
1. If necessary the Contractor shall meet with each subcontractor and with the Resident Engineer to review and make warranted adjustments and finalize the Composite Schedule. Once the schedule is finalized, the Contractor shall sign and date a reproducible form of the Composite Schedule. The Composite Schedule must be finalized and signed by the Contractor within (30) thirty calendar days after the date established for commencement of the Contract, unless directed otherwise. The Composite Schedule must be reviewed and approved by the Resident Engineer.



2.3 RECOVERY COMPOSITE SCHEDULE:

- A. A Recovery Composite Schedule is not required unless the City issues an Acceleration Change Order. A Recovery Composite Schedule outlining and incorporating extraordinary efforts required to recover lost time with the aim of achieving completion of the project within the stipulated contract duration, plus authorized time extensions, must be developed and submitted within (5) five calendar days of the request by the Resident Engineer. Such Recovery Composite Schedule shall include all information as defined in Article 1.3 F and shall be prepared in the same manner as outlined in Sub-Sections 2.1 and 2.2. The Recovery Composite Schedule must be reviewed and approved by the Resident Engineer.

2.4 REVISED AND/OR UPDATED COMPOSITE SCHEDULE:

- A. The Contractor shall revise and/or update the approved Composite Schedule as directed. The Revised schedule shall be prepared in the same manner as outlined above in Sub-Sections 2.1 and 2.2.
- B. The Contractor shall mark actual progress, delays, work stoppage etc. in the row just below the approved schedule for the respective activity so that revisions can be compared.
- C. Such schedule also shall indicate graphically and chronologically any revisions to the start and completion of the remaining activities including revisions to all the pre-activity and post activity tasks for all subcontractors.
- D. If necessary, the Contractor shall meet with each subcontractor and with the Resident Engineer to review and make warranted adjustments and finalize the Revised Composite Schedule. Once the schedule is finalized, the Contractor shall sign and date a reproducible form of the Schedule. Such schedule must be prepared and submitted by the Contractor within Five (5) calendar days of request by the Resident Engineer. The Revised Composite Schedule must be reviewed and approved by the Resident Engineer.

2.5 SUBMITTALS SCHEDULE:

- A. Preparation: The Contractor shall submit a schedule of submittals, arranged in chronological order by dates required by the construction schedule. Include time required for review, re-submittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
- B. SCHEDULE F: Schedule F sets forth all submittal requirements for shop drawings and material samples. Schedule F is included in the Addendum. At the kick-off meeting, the Contractor must review this Schedule with the Resident Engineer and the Design Consultant. Within 10 days after the kick-off meeting, the Contractor must complete information on Schedule F concerning the submission date, the required delivery date and the fabrication time. For all required submittals of shop drawings and material samples, the Schedule F provided by the Contractor must indicate a submission date which is at least 20 business days prior to the date of the manufacture of the item or materials to be installed. In addition, if so directed by the Commissioner, the Schedule F provided by the Contractor must indicate a submission date for shop drawings and/or material samples of specified items or materials which is within 60 business days after the kick-off meeting. In the event of any conflict between the Specifications and Schedule F, Schedule F shall take precedence; provided, however, in the event of an omission from Schedule F (i.e., Schedule F omits either a reference to or information concerning a submittal requirement which is set forth in the Specifications), such omission from Schedule F shall have no effect and the Contractor's submittal obligation, as set forth in the Specifications, shall remain in full force and effect.
- C. Review: The Resident Engineer will review the Schedule F submitted by Contractor. Upon acceptance, the Resident Engineer will date and sign the schedule as approved and transmit it to the Design Consultant, Contractor and others within DDC as he/she deems appropriate.



2.6 REPORTS:

- A. Daily Construction Reports: The Contractor shall submit to the Resident Engineer written Daily Construction Reports at the end of each work day, recording basic information such as the date, day, weather conditions, and contract days passed, remaining contract duration/days and the following information concerning the Project.

Information: The reports shall be prepared by the Contractor's Superintendent and shall bear the Contractor's Superintendents signature. Each report shall contain the following information:

1. List of name of Contractor, subcontractors, their work force in each category, and details of activities performed.
2. The type of materials and/or major equipment being installed by the Contractor and/or by each subcontractor.
3. The major construction equipment being used by the Contractor and/or subcontractors.
4. Material and Equipment deliveries.
5. High and low temperatures and general weather conditions.
6. Accidents.
7. Meetings and significant decisions.
8. Unusual events.
9. Stoppages, delays, shortages, and losses.
10. Meter readings and similar recordings
11. Emergency procedures.
12. Orders and/or requests of authorities having jurisdiction.
13. Approved Change Orders received and implemented.
14. Field Orders and Directives received and implemented.
15. Services connected and disconnected.
16. Equipment or system tests and startups.
17. Partial Completions and occupancies.
18. Substantial Completions authorized.

NOTE: If there is NO ACTIVITY at site, a daily report indicating so and the reason for no activity at the site must be submitted.

- B. Material Location Reports: The contractor shall submit a Material Location Report at weekly OR monthly intervals as determined and established by the Resident Engineer. Such report shall include a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.
- C. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit a Request For Information (RFI) form with a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.7 SPECIAL REPORTS:

- A. Accident report, incident report, special condition report for the conditions out of control of any party involved with the project effecting project progress, explaining impact on the project schedule and cost if any.

PART III – EXECUTION (Not Used)
END OF SECTION 01 32 00



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Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

No Text

CONSTRUCTION PROGRESS DOCUMENTATION
01 32 00 - 6



NEW YORK CITY DEPARTMENT OF
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SECTION 01 32 33
PHOTOGRAPHIC DOCUMENTATION

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SECTION 01 32 33

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract]

1.2 SUMMARY:

- A. This Section includes the following:
1. Photographic Media
 2. Construction Photographs
 3. Pre-construction Photographs
 4. Periodic Construction Progress Photographs
 5. Special Photographs
 6. DVD Recordings
 7. Final Completion Construction Photographs
- B. RELATED SECTIONS: include without limitation the following:
1. Section 01 10 00 SUMMARY
 2. Section 01 33 00 SUBMITTAL PROCEDURES
 3. Section 01 35 91 HISTORIC TREATMENT PROCEDURES
 4. Section 01 78 39 CONTRACT RECORD DOCUMENTS
 5. Section 01 81 19 INDOOR AIR QUALITY REQUIREMENTS FOR LEED BUILDINGS
- C. PHOTOGRAPHER - The Contractor shall employ and pay for the services of a professional photographer who shall take photographs showing the progress of the work for all Contracts.

1.3 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.4 SUBMITTALS:

- A. Qualification Data: For photographer.



- B. Key Plan: With each Progress Photograph Submittal include a key plan of Project site and building with notation of vantage points marked for location and direction of each image. Indicate location, elevation or story of construction. Include same label information as corresponding set of photographs.
- C. Construction Progress Photograph Prints: Take Progress Photographs bi-weekly and submit four color prints of each photographic view for each trade to the Resident Engineer. Such photographs shall be included in each monthly progress report or as otherwise directed by the Resident Engineer.
- D. Construction Photograph Negatives: Submit a complete set of photographic negatives in individually protected negative sleeves with each submittal of prints. Identify negatives with label matching photographic prints.
- E. Digital Images: If Digital Media is used, submit a complete set of digital color image electronic files on CD-ROM with each submittal of prints. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as the sensor, un-cropped.

1.5 QUALITY ASSURANCE:

- A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

1.6 COORDINATION:

- A. The Contractor and its subcontractor(s) shall cooperate with the photographer and provide auxiliary services requested, including access to Project site and use of temporary facilities, including temporary lighting required to produce clear, well-lit photographs without obscuring shadows.

1.7 COPYRIGHT:

- A. The Contractor shall include the provisions set forth below in the agreement between the Contractor and the Photographer who will provide the construction photographs described in this section. The Contractor shall submit to the Resident Engineer a copy of its agreement with the Photographer.
- B. Any photographs, images and/or other materials produced pursuant to this Agreement, and any and all drafts and/or other preliminary materials in any format related to such items produced pursuant to this Agreement, shall upon their creation become the exclusive property of the City.
- C. Any photographs, images and/or other materials provided pursuant to this Agreement ("Copyrightable Materials") shall be considered "work-made-for-hire" within the meaning and purview of Section 101 of the United States Copyright Act, 17 U.S.C. § 101, and the City shall be the copyright owner thereof and of all aspects, elements and components thereof in which copyright protection might exist. To the extent that the Copyrightable Materials do not qualify as "work-made-for-hire," the Photographer hereby irrevocably transfers, assigns and conveys exclusive copyright ownership in and to the Copyrightable Materials to the City, free and clear of any liens, claims, or other encumbrances. The Photographer shall retain no copyright or intellectual property interest in the Copyrightable Materials. The Copyrightable Materials shall be used by the Photographer for no purpose other than in the performance of this Agreement without the prior written permission of the City. The Department may grant the Photographer a license to use the Copyrightable Materials on such terms as determined by the Department and set forth in the license.
- D. The Photographer acknowledges that the City may, in its sole discretion, register copyright in the Copyrightable Materials with the United States Copyright Office or any other government agency authorized to grant copyright registrations. The Photographer shall fully cooperate in this effort, and agrees to provide any and all documentation necessary to accomplish this.



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- E. The Photographer represents and warrants that the Copyrightable Materials: (i) are wholly original material not published elsewhere (except for material that is in the public domain); (ii) do not violate any copyright Law; (iii) do not constitute defamation or invasion of the right of privacy or publicity; and (iv) are not an infringement, of any kind, of the rights of any third party. To the extent that the Copyrightable Materials incorporate any non-original material, the Photographer has obtained all necessary permissions and clearances, in writing, for the use of such non-original material under this Agreement, copies of which shall be provided to the City.

PART II – PRODUCTS

2.1 PHOTOGRAPHIC MEDIA:

- A. Photographic Film: Medium format, 2-1/4 by 2-1/4 inches (60 by 60 mm).
- B. Digital Images:
1. Construction Progress Images: Color images in JPEG format with minimum sensor size of 1.3 megapixels.
 2. Presentation Quality Images: Provide Color images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1024 by 768 with 8"x10" original capture at 300 dpi or greater.
- C. Prints:
1. Format: 8-by-10-inch (203-by-254-mm) smooth-surface matte color prints on single-weight commercial-grade stock paper, with 1inch wide margins and punched for standard 3-ring binder.
 2. Identification: On the front of each photograph affix a label in the margin with Project name and date photograph was taken. On the back of each print, provide an applied label or rubber-stamped impression with the following information:
 - a. Project Contract I.D. Number.
 - b. Project Contract Name.
 - c. Name of Contractor. (and Subcontractor Trade Represented)
 - d. Subject of Image Taken.
 - e. Date and time photograph was taken if not date stamped by camera.
 - f. Description of vantage point, indicating location, direction and other pertinent information.
 - g. Unique sequential identifier.
 - h. Name and address of photographer.

PART III – EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS:

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
1. Maintain key plan with each set of construction photographs that identifies each photographic location and direction of view.
- B. Film Images:
1. Date Stamp: Unless otherwise indicated, date and time stamp each photograph as it is being taken so stamp is integral to photograph.



2. Field Office Prints: Retain one set of prints of progress photographs in the field office at Project site, available at all times for reference. Identify photographs same as for those submitted to Commissioner.
- C. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 1. Date and Time: Include date and time in filename for each image.
 2. Field Office Images: Maintain one set of images on CD-ROM in the field office at Project site, available at all times for reference. Identify images same as for those submitted to Commissioner.

3.2 PRE-CONSTRUCTION & PRE-DEMOLITION PHOTOGRAPHS:

- A. Before commencement of Contract work at the site, take color photographs of Project site and surrounding properties, including existing structures or items to remain during construction, from different vantage points, as directed by the Resident Engineer.
 1. Flag applicable excavation areas and construction limits before taking construction photographs.
 2. Take photographs of minimum eight (8) views to show existing conditions adjacent to property before starting the Work.
 3. Take applicable photographs of minimum eight (8) views of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
 4. Take additional photographs as required or directed by the Resident Engineer to record settlement or cracking of adjacent structures, pavements, and improvements.
- B. Demolition Operations: Take photographs as directed by the Resident Engineer of minimum of eight (8) views each before commencement of demolition operations, at mid-point of operations and at completion of operations.
- C. Pre-Demolition Photographs: Take archival quality color photographs, to include all exterior building facades, of all structures at the Project site designated to be fully demolished or removed in compliance with NYC Building Code requirements. Submit four (4) complete sets of pre-demolition photographs, in the format specified herein, to the Resident Engineer for submission to the Department of Buildings.

3.3 PERIODIC CONSTRUCTION PROGRESS PHOTOGRAPHS:

- A. Take photographs of minimum eight (8) views bi-weekly as directed by the Resident Engineer of construction progress for each contract trade. Select vantage points to show status of construction and progress since last photographs were taken.

3.4 SPECIAL PHOTOGRAPHS:

- A. The photographer shall take special photographs of subject matter or events as specified in other sections of the Project Specifications from vantage points specified or as otherwise directed by the Resident Engineer.
- B. Historical Elements: As required in Section 01 35 91, HISTORIC TREATMENT PROCEDURES, for Contract work at designated landmark structures or sites the photographer, as specified and required by individual sections of the Contract documents or at the direction of the Commissioner, shall take images of existing elements scheduled to be removed for replacement, repair or replication in quantities as directed, including post-construction photographs of completed work as directed by the Commissioner.



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1. Take Presentation Quality Photographs of designated landmark structures as directed by the Commissioner for submission to the New York City Landmarks Preservation Commission. Provide a minimum of four color photographic prints of each view as directed.

3.5 DVD RECORDING:

- A. When DVD Recording of Demonstration and Training sessions is required for Non-Commissioned projects the Contractor shall provide the services of a Videographer as indicated in Section 01 79 00, DEMONSTRATION AND OWNER'S PRE-ACCEPTANCE ORIENTATION.

3.6 FINAL COMPLETION CONSTRUCTION PHOTOGRAPHS:

- A. Take color photographs of minimum eight (8) unobstructed views of the completed project or project and site, as directed by the Commissioner and after all scaffolding, hoists, shanties, field offices or other temporary work has been removed and final cleaning is done after date of Substantial Completion for submission as Project Record Documents. Submit four (4) sets of each view of Presentation Quality photographic prints including negatives and/or digital images electronic file

END OF SECTION 01 32 33



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

No Text

PHOTOGRAPHIC DOCUMENTATION
01 32 33 - 6



NEW YORK CITY DEPARTMENT OF
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SECTION 01 33 00
SUBMITTAL PROCEDURES

PART I – GENERAL:

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Coordination Drawings, Catalogue Cuts, Material Samples and other submittals required by the Contract Documents.
- B. Review of submittals does not relieve the Contractor of responsibility for any Contractor's errors or omissions in such submittals, nor from responsibility for complying with the requirements of the Contract.
- C. Responsibility of the Contractor: The approval of Shop Drawings will be general and shall not relieve the Contractor of responsibility for the accuracy of such Shop Drawings, nor for the proper fitting and construction of the work, nor of the furnishing of materials or work required by the Contract and not indicated on the Shop Drawings. Approval of Shop Drawings shall not be construed as approving departures from the Contract Drawings, Supplementary Drawings or Specifications.
- D. This Section includes the following:
1. Definitions
 2. Submission Procedures
 3. Coordination Drawings
 4. LEED Submittals
 5. Ultra Low Sulfur Diesel Fuel Reporting
 6. Construction Photographs and DVD Recordings
 7. As-Built Documents

1.3 RELATED SECTIONS: Include without limitation the following:

- | | | |
|----|------------------|--|
| A. | Section 01 10 00 | SUMMARY |
| B. | Section 01 31 00 | PROJECT MANAGEMENT AND COORDINATION |
| C. | Section 01 32 00 | CONSTRUCTION PROGRESS DOCUMENTATION |
| D. | Section 01 32 33 | PHOTOGRAPHIC DOCUMENTATION |
| E. | Section 01 77 00 | CLOSEOUT PROCEDURES |
| F. | Section 01 78 39 | CONTRACT RECORD DOCUMENTS |
| G. | Section 01 81 13 | SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS |

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or



- combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- C. Submittals: Written and graphic information that requires responsive actions and includes without limitation all shop drawings, product data, letters of certification, tests and other information required for quality control and as required by the Contract Documents.
 - D. Informational Submittals: Written information that does not require responsive action. Submittals may be rejected for non-compliance with the Contract.
 - E. Shop Drawings: Include drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data, except for coordination drawings, specifically prepared for the project by the Contractor or any subcontractor, manufacturer, supplier or distributor, which illustrates how specific portions of the work shall be fabricated and/or installed.
 - F. Coordination Drawings: As required in Section 01 31 00 PROJECT MANAGEMENT AND COORDINATION.
 - G. Product Data and Quality Assurance Submittals: Includes manufacturer's standard catalogs, pamphlets and other printed materials including without limitation the following:
 - 1. Catalogue and Product specifications
 - 2. Installation instructions
 - 3. Color charts
 - 4. Catalog cuts
 - 5. Rough-in diagrams and templates
 - 6. Wiring diagrams
 - 7. Performance curves
 - 8. Operational range diagrams
 - 9. Mill reports
 - 10. Design data and calculations
 - 11. Certification of compliance or conformance
 - 12. Manufacturer's instructions and field reports

1.5 COORDINATION DRAWINGS:

- A. The Contractor shall provide reproducible Coordination Drawing(s) of the reflective ceiling showing the integration of all applicable contract work, including general construction work as well as trade work (Plumbing, HVAC, and Electrical) to be performed by subcontractors. The Coordination Drawing(s) shall include, without limitation, the following information:
 - 1. General Construction work showing the reflective ceiling plan including starting points, ceiling and beam soffits elevations, ceiling heights, roof openings, etc.
 - 2. HVAC Contract work showing ductwork, heating and sprinkler piping, location of grilles, registers etc. and access doors in hung ceilings. Locations shall be fixed by elevations and dimensions from column centerlines and/or walls.
 - 3. Plumbing Contract work including piping, valves, cleanouts etc., indicating locations and elevations and shall indicate the necessary access doors.
 - 4. Electrical Contract work indicating fixtures, large conduit runs, clearances, pull boxes, junction boxes, sound system speakers, etc.
- B. The Contractor shall issue the completed Coordination Drawing(s) to the Resident Engineer for his/her review. The Resident Engineer may call as many meetings as necessary with the Contractor, including



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- attendance by applicable subcontractors, and may call on the services of the Design Consulting where necessary, to resolve any conflicts that become apparent.
- C. Upon resolution of any conflicts, the Contractor shall provide a final Coordination Drawing(s) which will become the Master Coordination Drawing(s). The Master Coordination Drawing(s) shall be signed and dated by the Contractor to indicate acceptance of the arrangement of the work.
 - D. A reproducible copy of the Master Coordination Drawing(s) shall be provided by the Contractor to each of the appropriate subcontractor(s), the Resident Engineer and the Design Consultant for information.
 - E. Shop Drawings shall not be submitted prior to acceptance of the final coordinated drawings and shall be prepared in accordance with the Master Coordination Drawing(s). No work will be permitted without accepted Shop Drawings. It is therefore essential that this procedure be instituted as quickly as possible.

1.6 SUBMITTAL PROCEDURES:

- A. Refer to Section 01 35 03 GENERAL MECHANICAL REQUIREMENTS and Section 01 35 06 GENERAL ELECTRICAL REQUIREMENTS for additional submittal requirements involving electrical and mechanical work or equipment of any nature called for the project.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activities, with the Submittal Schedule specified in Section 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - 3. The Commissioner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: The Submittals Schedule is set forth in Schedule F, which is included in the Addendum.
- D. Identification: Place a permanent label or title block on each submittal for identification.
 - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
 - 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Design Consultant.
 - 3. Include the following minimum information on label for processing and recording action taken:
 - a. Project name, DDC Project Number and Contract Number
 - b. Date.
 - c. Name and address of Design Consultant.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
- E. Transmittal:
 - 1. Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form in triplicate. Transmittals received from sources other than the



Contractor will be returned without review. Re-submission of the same drawings or product data shall bear the original number of the prior submission and the original titles.

2. Transmittal Form: Provide locations on form for the following information:
 - a. Project name, DDC Project number and Contract Number
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:)
 - e. Names of Contractor, subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Transmittal number, numbered consecutively.
 - k. Submittal and transmittal distribution record.
 - l. Remarks.
 - m. Signature of transmitter.

F. Shop Drawings:

1. Procedures for Preparing, Forwarding, Checking and Returning all Shop Drawings shall be, generally, as follows:
 - a. The Contractor shall make available to its subcontractors the necessary Contract Documents and shall instruct such subcontractor to determine dimensions and conditions in the field, particularly with reference to coordination between the trade subcontractors. The Contractor shall direct its subcontractors to prepare Shop Drawings for submission to the Design Consultant in accordance with the requirements of these General Conditions. The Contractor shall also direct its subcontractors to "Ring Up" corrections made on all re-submissions for approval, so as to be readily seen, and that the symbol "sub" be used to identify the source of the correction or information that has been added.

The Contractor shall:
 1. Review and be responsible to the Commissioner, for information shown on its subcontractor's Shop and Installation drawings and manufacturers' data, and also for conformity to Contract Documents.
 2. "Ring Up" corrections made on all submissions for approval, so as to be readily seen, and that the symbol "GC", "PL", "HVAC" or "EL" be used to indicate that the correction and/or information added was made by the Contractor and/or its subcontractor(s).
 3. Clearly designate which entity is to perform the work when the term, "work by others" or other similar phrases are indicated on the Contract Drawings before submission to the Design Consultant.
 4. Stamp submissions "Recommended for Acceptance", date and forward to the Design Consultant.
2. The Contractor shall promptly prepare and submit project specific layout detail and Shop Drawings of such parts of the work as are indicated in the Specifications, Schedule F of the Addendum or as required. These Shop Drawings shall be made in accordance with the Contract Drawings, Specifications and Supplementary Drawings, if any. The Shop Drawings shall be accurate and distinct and give all the dimensions required for the fabrication, erection and installation of the work.
3. Size of Drawings: The Shop Drawings, unless otherwise directed, shall be on sheets of the same size as the Contract Drawings, drawn accurately and of sufficient scale to be legible, with a one half (1/2) inch marginal space on each side and a two (2) inch marginal space for binding on the left side.



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4. Scope of Drawings: Shop Drawings shall be numbered consecutively and shall accurately and distinctly represent all aspects of the work, including without limitation the following:
 - a. All working and erection dimensions.
 - b. Arrangements and sectional views.
 - c. Necessary details, including performance characteristics, and complete information for making necessary connections with other work.
 - d. Kinds of materials including thickness and finishes.
 - e. Identification of products.
 - f. Fabrication and installation drawings.
 - g. Roughing-in and setting diagrams.
 - h. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - i. Shop work manufacturing instructions.
 - j. Templates and patterns.
 - k. Schedules.
 - l. Design calculations.
 - m. Compliance with specified standards.
 - n. Notation of coordination requirements.
 - o. Notation of dimensions established by field measurement.
 - p. Relationship to adjoining construction clearly indicated.
 - q. Seal and signature of professional engineer if specified.
 - r. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - s. All other information necessary for the work and/or required by the Commissioner.
5. Titles and Reference: Shop Drawings shall be dated and contain:
 - a. Name of the Project, DDC Project Number and Contract Number.
 - b. The descriptive names of equipment, or materials covered by the Contract Drawings and the classified item number or numbers, if any, under which it is, or they are required.
 - c. The locations or points and sequence at which materials, or equipment, are to be installed in the work.
 - d. Cross references to the section number, detail number and paragraph number of the Contract Specifications.
 - e. Cross references to the sheet number, detail number, etc., of the Contract Drawings.
6. Field Measurements: In addition to the above requirements, the Shop Drawings shall be signed by the Contractor and, if applicable, the subcontractor responsible for preparation of the Shop Drawings. Each Shop Drawing shall be stamped with the following wording:

FIELD MEASUREMENTS: The Contractor certifies that it has verified and supplemented the Contract Drawings by taking all required field measurements, which said measurements correctly reflect all field conditions and that this Shop Drawing incorporates said measurements.
7. Contractor's Statement with Submittal: Any Submittal by the Contractor for acceptance, including without limitation, all dimensional drawings of equipment, blueprints, catalogues, models, samples and other data relative to the equipment, the materials, the work or any part thereof, must be accompanied by a statement that the Submittal has been examined by the Contractor and that everything shown in the Submittal is in accordance with the requirements of the Contract Drawings and Specifications. If there is any discrepancy between what is shown in the Submittal and the requirements of the Contract Drawings and Specifications, the Contractor shall, in its statement, list and clearly describe each such discrepancy.

Acceptance will be given based upon the Contractor's representation that what is shown in the Submittal is in accordance with the requirements of the Contract Drawings and Specifications. If



the Contractor's statement indicates any discrepancy between what is shown in the Submittal and the requirements of the Contract Drawings and Specifications, such change is subject to review and prior written acceptance by the Design Consultant. In addition, such change may require a change order in accordance with Article 25 of the Contract. In the event any such change is approved, any additional expense or increased cost in connection with the change is the sole responsibility of the Contractor.

8. Submission of Shop Drawings:

- a. Initial Submission: The Contractor shall submit seven (7) copies of each Shop Drawing to the Design Consultant for his/her review and acceptance. The Design Consultant will transmit Shop Drawings to appropriate sub-consultants for review and acceptance, including Commissioning Authority/Agent as applicable. A satisfactory Shop Drawing will be stamped "No Exceptions Taken", be dated and distributed by the Design Consultant as follows:
- 1) Two (2) copies thereof will be returned to the Contractor by letter.
 - 2) Three (3) copies of the approved Shop Drawing and copy of the transmittal letter to the Contractor will be forwarded to DDC.
 - 3) One copy will be retained by the Design Consultant.
 - 4) One copy will be forwarded / retained by sub-consultant(s) as appropriate.

Should the Shop Drawing(s) be "Rejected" or noted "Revise and Resubmit" by the Design Consultant, the Design Consultant will return the Shop Drawings to the Contractor with the necessary corrections and changes to be made as indicated thereon.

- b. Revisions: The Contractor must make such corrections and changes and again submit seven (7) copies of each shop drawing to the Design Consultant. The Contractor shall revise and resubmit the Shop Drawing as required by the Design Consultant until the Shop Drawings are stamped "No Exceptions Taken". However, Shop Drawings which have been stamped "Make Corrections Noted" shall be considered an "Acceptable" Shop Drawing and NEED NOT be resubmitted.
- c. Commencement of Work: No work or fabrication called for by the Shop Drawings shall be done until the acceptance of the said drawings by the Design Consultant is given. In addition to the foregoing Shop Drawing transmissions, a copy of any Shop Drawing prepared by any of the Contractor's subcontractors which Shop Drawing indicated work related to, adjacent to, impinging upon, or affecting work to be done by other subcontractors shall be transmitted to the subcontractors so affected. [These accepted Shop Drawings shall be distributed to the affected subcontractors when required with a copy of the transmittal to the Resident Engineer.]
- d. Variations: If the Shop Drawings show variations from the Contract requirements because of standard shop practice or other reasons, the Contractor shall make specific mention of such variations in its letter of submittal. Acceptance of the Shop Drawings shall constitute acceptance of the subject matter thereof only and not of any structural apparatus shown or indicated.

G. Product Data:

1. General: Except as otherwise prescribed herein, the submission, review and acceptance of Product Data and Catalogue cuts shall conform to the procedures specified in Sub-Section 1.6 F, Shop Drawings.
2. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
3. Mark each copy of each submittal to show which products and options are applicable.
4. Include the following information, as applicable:



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- a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operation and maintenance manuals.
 - k. Compliance with specified referenced standards.
 - l. Testing by recognized testing agency.
 - m. Application of testing agency labels and seals.
 - n. Notation of coordination requirements.
5. Submit Product Data before or concurrent with Samples.
6. Submission of Product Data:
- a. Initial Submission: The Contractor shall submit seven (7) sets of Product Data to the Design Consultant for his/her review and acceptance. The Design Consultant will transmit Product Data to appropriate sub-consultants for review and acceptance, including Commissioning Authority/Agent as applicable. A satisfactory catalogue cut will be stamped "No Exception Taken", be dated and distributed as follows:
 - 1) Two (2) copies thereof will be returned to the Contractor by letter.
 - 2) Three (3) copies of the Product Data and copy of the transmittal letter to the Contractor will be forwarded to DDC
 - 3) One copy will be retained by the Design Consultant.
 - 4) One copy will be forwarded / retained by sub-consultant(s) as appropriate.Should the Product Data be "Rejected" or noted "Revise and Resubmit" by the Design Consultant, the Design Consultant will return one (1) set of such Product Data to the Contractor with the necessary corrections and changes to be made indicated and one (1) set to DDC.
7. Revisions: The Contractor must make such corrections and changes and again submit seven (7) copies of each Product Data for the review of the Design Consultant. The Contractor shall revise and resubmit the Product Data as required by the Design Consultant until the submission is stamped "No Exceptions Taken" by the Design Consultant. However, Product Data which has been stamped "Make Corrections Noted" shall be considered an "Accepted" Product Data and NEED NOT be resubmitted.
- H. Samples of Materials:
1. For samples of materials involving electrical work of any nature, refer to Section 00 35 06 - General Electrical Requirements.
 2. Samples shall be in triplicate, of sufficient size to show the quality, type, range of color, finish and texture of the material.
 3. Each of the samples shall be labeled as follows:
 - a. Name of the Project, DDC Project Number and Contract Number.
 - b. Name and quality of the material.
 - c. Date.



- d. Name of Contractor, subcontractor, manufacturer and supplier.
- e. Related Specification or Contract Drawing reference to the samples submitted.
4. A letter of transmittal, in triplicate, from the Contractor requesting acceptance must accompany all such samples.
5. Transportation charges to the Design Consultant's office must be prepaid on all samples forwarded.
6. Samples for testing purposes shall be as required in the Specifications.
7. Samples on Display: When samples are specified to be equal to approved product, they shall be carefully examined by the Contractor and by those whom the Contractor expects to employ for the furnishing of such materials.
8. Timely Submissions Log/Schedule: Samples shall be submitted in accordance with approved Shop Drawing log so as to permit proper consideration without delaying any operation under the project. Materials should not be ordered until acceptance is received, in writing, from the Design Consultant. All materials shall be furnished equal in every respect to the accepted samples.
9. The Acceptance of any samples will be given as promptly as possible, and shall be only for the characteristic color, texture, strength, or other feature of the material named in such approval, and no other. When this approval is issued by the Design Consultant, it is done with the distinct understanding that the materials to be furnished will fully and completely comply with the Specifications, the determination of which may be made at some later date by a laboratory test or by other procedure. Use of materials will be permitted only so long as the quality remains equal to the approved samples and complies in every respect with the Specifications, and the colors and textures of the samples on file in the office of the Design Consultant, for the project.
10. Acceptability of test Data: The Commissioner will be the final judge as to acceptability of laboratory test data and performance in service of materials submitted.
11. Valuable Samples: Valuable samples, such as hardware, plumbing and electrical fixtures, etc., not destroyed by inspection or test, will be returned to the Contractor and may be incorporated into the work after all questions of acceptability have been settled, providing suitable permanent records are made as to the location of the samples, their properties, etc.
12. Equivalent Quality: Any material, article and/or equipment which is designated in the Drawings and/or Specifications by a number in the catalogue of any manufacturer or by a manufacturer's grade or trade name is designated for the purpose of describing the material, article and/or equipment and fixing the standard of performance and/or function, as well as the quality and/or finish. Any material, article and/or equipment which is other than what is specified in the Drawings and/or Specifications will only be accepted if the Commissioner makes a written determination that such material, article and/or equipment is equivalent to that which is specified in the Drawings and/or Specifications.
13. The submission of any material, article and/or equipment as the equal of any material, article and/or equipment set forth in the Drawings and/or Specifications as a standard shall be accompanied by any and all information essential for determining whether such proposed material, article and/or equipment is equivalent to that which is specified. Such information shall include, without limitation, illustrations, drawings, descriptions, catalogues, records of tests, samples, as well as information regarding the finish, durability and satisfactory use of such proposed material, article and/or equipment under similar operating conditions.



REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 1.7

1.7 LEED SUBMITTALS:

- A. Comply with submittal requirements specified in Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL; Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS; Section 01 81 13.13, VOLATILE ORGANIC COMPOUND (VOC) LIMITS FOR LEED BUILDINGS; Section 01 81 19, ADHESIVES, SEALANTS, PAINTS AND COATINGS FOR LEED BUILDINGS and Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS.
- B. LEED Building submittal information shall be assembled into one package per each applicable specification section, separate from all other non-LEED submittals. Each submittal package shall have a separate transmittal and identification as described in Sub-Section 1.6 herein.
- C. Number of Copies: Submit FOUR (4) copies of LEED submittals, in accordance with procedure described in Sub-Section 1.6 herein, unless otherwise indicated.
 1. LEED Submittals shall be clearly marked "LEED".
- D. Material Safety Data Sheets (MSDSs) for LEED Certification: Submit information necessary to show compliance with LEED certification requirements, which will be the limit of the Design Consultant's review for LEED compliance.
 1. Designated LEED submittals that include non-LEED MSDS data will not be reviewed. The entire submittal will be returned for re-submission.
- E. Product Cut Sheets and/or Shop Drawings for LEED Certification: Provide product cut sheets and/or shop drawings with the Contractor's or sub-contractor's stamp, confirming that the submitted products are the products installed in the Project. For detailed requirements refer to Sub-Section 1.6 of Section 01 81 13 SUSTAINABLE DESIGN REQUIREMENTS FOR LEED PROJECTS.
 1. Provide the quantity, length, area, volume, weight, and/or cost of each product submitted as required to satisfy LEED documentation requirements. Refer to Sub-Section 1.6 of Section 01 81 13 SUSTAINABLE DESIGN REQUIREMENTS FOR LEED PROJECTS.

1.8 ULTRA LOW SULFUR DIESEL FUEL AND BEST AVAILABLE TECHNOLOGY REPORTING:

- A. In accordance with Section 01 10 00 Summary, Sub-Section 1.5 E, the Contractor shall submit reports to the Commissioner regarding the use of Ultra Low Sulfur Diesel Fuel and Best Available Technology (BAT) in Non road Vehicles. Submission of such reports shall be in accordance with the schedule, format, directions and procedures established by the Commissioner.

1.9 CONSTRUCTION PHOTOGRAPHS AND DVD RECORDINGS:

- A. Submit construction progress photographs and DVD recordings in accordance with requirements of Section 01 32 33, PHOTOGRAPHIC DOCUMENTATION

1.10 AS-BUILT DOCUMENTS:

- A. Submit all as-built documents in accordance with Section 01 78 39 CONTRACT RECORD DOCUMENTS.



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Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 33 00

SUBMITTAL PROCEDURES
01 33 00 - 10



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Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

**SECTION 01 35 03
GENERAL MECHANICAL REQUIREMENTS**

REFER TO THE ADDENDUM FOR APPLICABILITY OF THIS SECTION 01 35 03

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. The General Mechanical Requirements contained herein shall be followed by the Contractor, as well as its subcontractor for HVAC work. This Section sets forth the General Requirements applicable to mechanical work for the Project. Such requirements are intended to be read in conjunction with the Specifications and Contract Drawings for the Project. In the event of any conflict between the requirements set forth in this Section and the requirements of the Specifications and/or the Contract Drawings, whichever requirement is the most stringent, as determined by the Commissioner, shall take precedence.

1.3 RELATED SECTIONS: Include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 33 00 SUBMITTAL PROCEDURES
- C. Section 01 35 06 GENERAL ELECTRICAL REQUIREMENTS
- D. Section 01 42 00 REFERENCES
- E. Section 01 77 00 CLOSEOUT PROCEDURES
- F. Section 01 78 39 CONTRACT RECORD DOCUMENTS

1.4 DEFINITIONS:

- A. **CONCEALED PIPING AND DUCTS** -: shall mean piping and ducts hidden from sight in masonry or other construction, in floor fill, trenches, partitions, hung ceilings, furred spaces, pipe shafts and in service tunnels not used for passage. Where piping and ducts run in areas that have hung ceilings, such piping and ducts shall be installed in the hung ceilings. For work on existing piping any insulation on such existing piping is to be tested for asbestos and abated, if found to be positive by a certified asbestos contractor. Such testing and abatement shall occur prior to the performance of any work on these pipes.

1.5 SUBMITTALS:

- A. **INTENT OF MECHANICAL CONTRACT DRAWINGS** – Mechanical Contract Drawings are in part diagrammatic and show the general arrangement of the equipment, ducts and piping included in the Contract and the approximate size and location of the equipment.
- B. The Contractor shall follow these Contract Drawings in laying out the work and verify the spaces in which it will be installed. The Contractor shall submit, as directed, Mechanical Shop Drawings, roughing drawings, manufacturer's Shop Drawings, field drawings, cuts, bulletins, etc., of all materials, equipment and methods of installation shown or specified in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.



1. Submit sheet metal shop standards. Submit manufacturer's product data including gauges, materials, types of joints, scaling materials and installations for metal ductwork materials and products.
2. Submit scaled layout drawing (3/8"=1") of metal ductwork and fittings including, but not limited to, duct sizes, locations, elevations, slopes of horizontal runs, wall and floor penetrations and connections. Show modifications of indicated requirements made to conform to local shop practice and how those modifications ensure that free area, materials and rigidity are not reduced. Layouts should include all the room plans, mechanical equipment rooms and penthouses. Method of attachment of duct hangers to building construction all with the support details. Coordinate shop drawings with related trades prior to submission.
3. Indicate duct fittings, particulars such as gauges, sizes, welds and configuration prior to start of work for low-pressure systems.
4. Submit maintenance data and parts lists for metal ductwork materials and products. Include this data, product data and shop drawings in maintenance manual.

1.6 ACCESSIBILITY:

All work shall be installed by the Contractor so as to be readily accessible for inspection, operation, maintenance and repair. Minor deviations from the arrangement indicated on the Contract Drawings may be made to accomplish this, but they shall not be made without approval by the Commissioner.

1.7 CHANGES IN PIPING, DUCTS, AND EQUIPMENT:

Wherever field conditions are such that for proper execution of the work, reasonable changes in location of piping, ducts and equipment are necessary and required, the Contractor shall make such changes as directed and approved, without extra cost to the City.

1.8 CLEANING OF PIPING, DUCTS, AND EQUIPMENT:

Piping, ducts and equipment shall be thoroughly cleaned by the Contractor of all dirt, cuttings and other foreign substances. Should any pipe, duct or other part of the several systems be obstructed by any foreign matter, the Contractor will be required to pay for disconnecting, cleaning and reconnecting wherever necessary for the purpose of locating and removing obstructions. The Contractor shall pay for repairs to other work damaged in the course of removing obstructions. For work on existing piping, ducts and equipment the Contractor shall pay special attention during this task so as not to disturb the insulation on such piping, ducts or equipment.

1.9 STANDARDIZATION OF SIMILAR EQUIPMENT:

Unless otherwise particularly specified, all equipment of the same kind, type or classification, and used for identical purposes, shall be the product of one (1) manufacturer.

1.10 SUPPORTING STRUCTURES DESIGNED BY THE CONTRACTOR:

Unless otherwise specified, supporting structures for equipment to be furnished by the Contractor shall be designed by an Engineer licensed in New York State retained by the Contractor. Supporting structures shall be built by the Contractor of sufficient strength to safely withstand all stresses to which they may be subjected, within permissible deflections, and shall meet the following standards:

- A. Structural Steel - ASTM Standard Specifications, AISC and New York City Construction Codes.



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- B. Concrete for supports for equipment shall conform to the Specifications for concrete herein, but in no case shall be less than the requirements of the New York City Construction Codes for average concrete.
- C. Steel reinforcement for concrete shall be of intermediate grade and shall meet the requirements of the Standard Specifications for Billet Steel-Concrete Reinforcement Bars, ASTM.
- D. Drawings and calculations shall be submitted for review and acceptance in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

1.11 ELIMINATION OF NOISE:

- A. All systems and/or equipment provided under the Contract shall operate without objectionable noise or vibration.
- B. Should operation of any one or more of the several systems produce noise or vibration which is, in the opinion of the Commissioner, objectionable, the Contractor shall at its own expense make changes in piping, equipment, etc. and do all work necessary to eliminate objectionable noise or vibration.
- C. Should noise or vibration found objectionable by the Commissioner be transmitted by any pipe or portions of the structure from systems and/or equipment installed under the Contract, the Contractor shall at its own expense install such insulators and make such changes in or additions to the installations as may be necessary to prevent transmission of this noise or vibration.

1.12 PRELIMINARY FIELD TEST:

As soon as conditions permit, the Contractor shall furnish all necessary labor and materials for, and shall make, preliminary field tests of the equipment to ascertain compliance with the requirements of the Contract. If the preliminary field tests disclose equipment that does not comply with the Contract, the Contractor shall, prior to the acceptance test, make all changes, adjustments and replacements required.

1.13 INSTRUCTIONS ON OPERATION:

At the time the equipment is placed in permanent operation by the City, the Contractor shall make all adjustments and tests required by the Commissioner to prove that such equipment is in proper and satisfactory operating condition. The Contractor shall instruct the City's operating personnel on the proper maintenance and operation of the equipment for the period of time called for in the Specifications.

1.14 CERTIFICATES:

On completion of the work, the Contractor shall obtain certificates of inspection, approval, acceptance and of compliance with all laws from all agencies and/or entities having jurisdiction over the work and shall deliver these certificates to the Commissioner in accordance with Section 01 77 00 CLOSEOUT PROCEDURES. The work shall not be deemed substantially complete until the certificates have been delivered.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 35 03



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Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

No Text

GENERAL MECHANICAL REQUIREMENTS
01 35 03 - 4



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SECTION 01 35 06 GENERAL ELECTRICAL REQUIREMENTS

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section sets forth the General Requirements applicable to electrical work for the Project. Such requirements are intended to be read in conjunction with the Specifications and Contract Drawings for the Project. In the event of any conflict between the requirements set forth in this Section and the requirements of the Project Specifications and/or the Contract Drawings, whichever requirement is the most stringent, as determined by the Commissioner, shall take precedence.
- B. This Section includes the following:
1. Procedure for Electrical Approval
 2. Submittals
 3. Electrical Installation Procedures
 4. Electrical Conduit System Including Boxes (Pull, Junction and Outlet)
 5. Electrical Wiring Devices
 6. Electrical Conductors and Terminations
 7. Circuit Protective Devices
 8. Distribution Centers
 9. Motors
 10. Motor Control Equipment
 11. Schedule of Electrical Equipment

1.3 RELATED SECTIONS: Include without limitation the following:

- | | | |
|----|------------------|---------------------------------|
| A. | Section 01 10 00 | SUMMARY |
| B. | Section 01 33 00 | SUBMITTAL PROCEDURES |
| C. | Section 01 35 03 | GENERAL MECHANICAL REQUIREMENTS |
| D. | Section 01 42 00 | REFERENCES |
| E. | Section 01 77 00 | CLOSEOUT PROCEDURES |
| F. | Section 01 78 39 | CONTRACT RECORD DOCUMENTS |

1.4 DEFINITIONS:

- A. **WIRING:** means both wire and raceway (rigid steel, heavy wall conduit unless specifically indicated otherwise).
- B. **POWER WIRING:** means wiring from a panel board or other specified source to a starter (if required) then to a disconnect (if required), then to the final point of usage such as a motor, unit or device.
- C. **CONTROL and/or INTERLOCK WIRING:** means that wiring that signals the device to operate or shut down in response to a signal from a remote control device such as a temperature, smoke, pressure, float,



etc. device (starters and disconnect switches are not included in this definition) regardless of the voltage required for the controlling device.

- D. **RIGID STEEL CONDUIT:** shall mean rigid steel, heavy wall conduit that is hot dipped galvanized inside and outside. The conduit shall meet the requirements of the latest edition, as amended, of the "Standard for Rigid Steel Conduit" of the Underwriters' Laboratories, Inc. Unless otherwise specified in the Specifications or indicated on the Contract Drawings, rigid steel conduit shall be used for all exposed work, for all underground conduits in contact with earth and for fire alarms systems, as required by the New York City Construction Codes.
- E. **ELECTRICAL METALLIC TUBING (EMT):** shall mean industry standard thin wall conduit of galvanized steel only. All elbows, bends, couplings and similar fittings which are installed as a part of the conduit system shall be compatible for use with electric metallic tubing. Couplings and terminating fittings shall be of the pressure type as approved by the Commissioner. Set screw fittings will not be acceptable. EMT shall meet the requirements of the latest edition, as amended, of the "Standard for Electrical Metallic Tubing of the Underwriters Laboratories Inc." EMT may only be used where specifically indicated. In no case will EMT be permitted in spaces other than hung ceilings and dry wall partitions.
- F. **FLEXIBLE METALLIC CONDUIT (FMC):** Shall mean a conduit made through the coiling of a self-interlocking ribbed strip of aluminum or steel, forming a hollow tube through which wires can be pulled. For final connections to motors and motorized equipment, not more than a 4' - 0" length of flexible conduit may be used. For watertight installations, this conduit shall be of a watertight type, attached with watertight glands or fittings for final connections from outlet box to recessed lighting fixtures and in locations only where specifically permitted by the Specifications or Contract Drawings.

1.5 PROCEDURE FOR ELECTRICAL APPROVAL:

This Sub-Section sets forth General Electrical information, as well as required approvals for all electrical work required for the Project, including ancillary electrical work which may be included in the work of other trade subcontractors.

- A. **ELECTRIC SERVICE:** The electric service supply is subject to commercial and operating variation of the utility company. Proper provision shall be made to have all apparatus operate normally under these conditions.
- B. **ACCEPTANCE:** Acceptance and approval of the work will be contingent upon the inspection and test of the installation by the City regulatory agency.
- C. **TESTS:** The Contractor shall notify the Commissioner when the Contractor has completed the work and is ready to have it inspected and tested. Upon completion of the work tests shall be made as required by the Commissioner of all electrical materials, electrical and associated mechanical equipment, and of appliances installed hereunder. The Contractor shall furnish all labor and material for such tests. Should the tests show that any of the material, appliances or workmanship is not first class or not in compliance with the Contract, the Contractor on written notice shall remove and promptly replace them with other materials in conformity with the Contract.
- D. **CERTIFICATE OF THE BUREAU OF ELECTRICAL CONTROL, OF THE DEPARTMENT OF BUILDINGS (B.E.C.):** The Contractor must file prior to requesting a substantial completion inspection a Certificate of Inspection issued by B.E.C. On completion of the work the Contractor shall obtain certificates of inspection, approval, acceptance and compliance from all agencies and/or entities having jurisdiction over the work and shall deliver these certificates to the Commissioner in accordance with Section 01 77 00 CLOSEOUT PROCEDURES.
- E. **RESPONSIBILITY FOR CARE AND PROTECTION OF EQUIPMENT:**
 - 1. The Contractor furnishing any equipment shall be responsible for the equipment until it has been finally inspected, tested and accepted, in accordance with the requirements of the Contract.



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2. After delivery and before and after installation, the Contractor shall protect all equipment against theft, injury or damage from all causes. The Contractor shall carefully store all equipment received for work, which is not immediately installed. If any equipment has been subject to possible injury by water, it shall be thoroughly dried out and put through a special dielectric test as directed by the Commissioner, at the expense of the Contractor or replaced by the Contractor without additional cost to the City.
- F. UNIFORMITY OF EQUIPMENT: Any two (2) or more pieces of equipment, apparatus or materials of the same kind, type or classification which are intended to be used for identical types of service, shall be made by the same manufacturer.

1.6 SUBMITTALS:

A. CONTRACTOR'S ELECTRICAL DRAWINGS AND SAMPLES FOR APPROVAL:

1. The Contractor shall submit to the Commissioner for approval, in accordance with Section 01 33 00 SUBMITTAL PROCEDURES, complete dimensional drawings of all equipment, wiring diagrams, motor test data, details of control, installation layouts showing all details and locations and including all schedules, and descriptions and supplementary data to comprise complete working drawings and instructions for the performance of the work. A description of the operation of the equipment and controls shall be included. A letter, in triplicate, shall accompany each submittal.
2. The Contractor shall submit in accordance with Section 01 33 00 SUBMITTAL PROCEDURES, duplicate samples of such materials and appliances as may be requested by the Commissioner for approval. These samples shall be properly tagged for identification and submitted for examination and test. After the samples are approved, one (1) sample will be returned to the Contractor and the other sample will be filed in the office of the Commissioner's representative for inspection use. After the Contract is completed, the second set of samples will be returned to the Contractor.

- B. TIMELINESS: All material shall be submitted in accordance with the submittal schedule in sufficient time for the progress of construction. Failure to promptly submit acceptable samples and dimensional drawings of equipment will not be accepted as grounds for an extension of time. The Commissioner may decline to consider submittals unless all related items are submitted at the same time.
- C. CONTRACTOR'S STATEMENT WITH SUBMITTALS: Contractor shall submit statement in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
- D. BULLETINS AND INSTRUCTIONS: The Contractor shall furnish and deliver to the Commissioner in accordance with Section 01 78 39, CONTRACT RECORD DOCUMENTS and Section 01 77 00, CLOSEOUT PROCEDURES, after acceptance of the work, four (4) complete sets of instructions, technical bulletins and any other printed matter (diagrams, prints, or drawings) required to provide complete information for the proper operation, maintenance and repair of the equipment and the ordering of spare parts.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION

3.1 ELECTRICAL INSTALLATION PROCEDURES:

This Sub-Section sets forth the General Installation Procedure that shall apply to all electrical work and electrical equipment appearing in the Contract.

(Refer to Sub-Section 1.4 DEFINITIONS for terms used in this section)

- A. **INTENT OF CONTRACT DOCUMENTS:** The Drawings and Specifications are to be interpreted as a means of conveying the scope and intent of the work without giving every minor electrical detail. It is intended, nevertheless, that the Contractor shall provide whatever labor and materials are found necessary, within the scope of the Contract, for the successful operation of the installation. Specific details of individual installations are to be finally decided upon when the Contractor submits Working or Shop Drawings for approval to DDC. Whenever there are two (2) or more methods to complete project work within the Contract scope, the Commissioner reserves the right to choose that method which, in the Commissioner's opinion, will afford the most satisfactory performance, lasting qualities, and accessibility for repairs, even though this selection is the most costly.
- B. **SCHEMATIC PLANS – APPROXIMATE LOCATIONS:** Conduits and wiring are shown on the plans for diagrammatic purposes only. Therefore, conduit layouts may not necessarily give the actual physical route of the conduits. The Contractor who installs a conduit system will also be required, as part of the work, to furnish and install all hangers and pull-boxes, including any special pull-boxes found necessary to overcome interferences, and to facilitate the pulling of electrical cables. Similarly, the locations of equipment, appliances, outlets and other items shown on Contract Drawings are only approximate and are to be definitively established when equipment Shop Drawings are submitted and approved by DDC during construction.
- C. **SLEEVES:** required for conduits passing through walls or floors, shall be furnished and set by the Contractor installing the conduits. Sleeves in waterproofed floors shall be provided with flashing extending 12 inches in all directions from sleeve and secured to waterproofing. Flashing shall be turned down into space between pipe and sleeve and caulked watertight. Flashing shall be 20 oz. cold rolled copper. Sleeves shall be supplied with welded flanges similar to those supplied by the subcontractor for Plumbing Work and shall extend one (1) inch above finished floor.
- D. **COORDINATION:** The Contractor shall keep in close touch with the construction progress and obtain the necessary information for the accurate placement of its work in ample time before project construction operations obstruct its work. The Contractor is to consult all other Contract Drawings, as well as approved equipment Shop Drawings on file in the Resident Engineer's Field Office. This will aid in avoiding interferences, omissions and errors in the electrical installation.
- E. **RESTORATION:** If drilling or cutting is done on finished surfaces of equipment or the structure, any marring of the surface shall be repaired or replaced by the Contractor. The Contractor shall be held responsible for corrective restoration due to its cutting or drilling, and for any damage to the project or its contents caused by the Contractor or the Contractor's workers. If any piercing of waterproofing occurs because of the installation of the work, the Contractor shall restore the waterproofing, at its own expense, to the satisfaction of the Commissioner.
- F. **ELECTRICAL WORK AT SITE:** The Contractor furnishing equipment consisting of a number of related electrical devices or appliances, mounted in a single enclosure, or on a common base, shall furnish this unit complete with internal wiring, connections, terminal boxes with copper connectors and/or lugs and ample electrical leads, ready for connection and operation. The cost of any wiring, re-wiring or other work required to be done on this unit in the field, shall be borne by the Contractor, without additional cost to the City.
- G. **COOPERATION AMONG SUBCONTRACTORS:** Whenever an electrically operated unit or system involves the combined work of several subcontractors for its installation and successful operation, the



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Contractor shall require each subcontractor to exercise the utmost diligence in cooperating with others to produce a complete, harmonious installation.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.2

3.2 ELECTRICAL CONDUIT SYSTEM INCLUDING BOXES (PULL, JUNCTION AND OUTLET):

This Sub-Section sets forth the requirements applying to the installation of electrical conduits, boxes or fittings. Rigid steel conduit shall be used throughout, unless otherwise directed by the Commissioner. Where the word 'conduit', without a modifier such as, rigid steel, EMT, etc., is specified to be used, it shall be interpreted to mean, rigid steel, heavy wall, threaded conduit.

(Refer to Sub-Section 1.4 DEFINITIONS for terms used in this section)

A. INSTALLATIONS AND APPLICATIONS:

1. Unless otherwise specified or indicated on the Contract Drawings, conduit runs shall be installed concealed in finished spaces.
2. **CONDUIT SIZES:** The sizes of conduit shall be as indicated on the Contract Drawings. Wherever conduit sizes are not indicated, the conduit shall meet the requirements of the New York City Electrical Code to accommodate the conductors to be installed therein.
3. Conduits shall be reamed smooth after cutting. No running threads will be permitted. Universal type couplings shall be used where required. Conduit joints shall be screwed up to butt. Empty conduits after installation shall have all open ends temporarily plugged to prevent the entrance of water or other foreign matter.
4. Conduits being installed in concrete or masonry shall be securely held in place during pouring and construction operations. A group of conduits terminating together shall be held in place by a template.
5. **UNDERGROUND STEEL CONDUITS:** Unless otherwise specified, all underground steel conduits in contact with earth shall be encased by the Contractor who installs them, in a covering of not less than two (2) inches of an approved concrete mixture. Concrete mix shall be one (1) part cement to four and one-half (4 ½) parts of fine and coarse aggregate.
6. **EXCAVATION RESTORATION PERMITS:** When installing underground conduits, duct banks or manholes the Contractor shall perform the work of cutting pavement, excavation shoring, keeping trenches or holes pumped dry, backfilling, restoration of surfaces to original condition and removal of excess earth and rubbish from premises. During the work, the Contractor shall provide adequate crossovers, protective barriers, lamps, flags, etc., to safeguard traffic and the public. When the work is in a public highway or street, the Contractor shall secure and pay for all necessary permits and inspection fees and pay the cost of repaving.
7. **EXPOSED CONDUIT SUPPORTS:** Exposed conduit shall be supported by Galvanized hangers with necessary inserts, beam clamps of approved design or attached to walls or ceilings by expansion bolts. Exposed conduits shall be supported or fastened at intervals not more than five (5) feet.
8. Exposed conduit shall be installed parallel or at right angles to ceiling, walls and partitions. Where direction changes of exposed conduit cannot be made with neat bends, such as required around beams or columns, conduit type fitting shall be used.



9. The conduit shall be installed with an approved expansion joint:
 - a. Wherever the conduit crosses a building expansion joint the Contractor will be held responsible for determining where the building expansion joints are located.
 - b. Every 200 feet, when in straight runs of 200 feet or longer.
 10. Conduit may only enter and leave a floating slab in the vertical direction, and then only in an approved manner. Horizontal entries into floating slabs are not permitted.
 11. Conduit installed in pipe shafts shall be properly supported to carry the total weight of the raceway system complete with cable. In addition at least one (1) horizontal brace per 10 ft. section shall be provided to assure stability of the raceway system.
 12. BUSHINGS AND LOCKNUTS: Approved bushings and locknuts shall be used wherever conduits enter outlet boxes, switch boxes, pull boxes, panel board cabinets, etc.
 13. CONDUIT BENDS: shall be made without kinking conduit or appreciably reducing the internal diameter. All bends in conduit of two (2) inch in diameter or larger shall be made with a hydraulic or power pipe bender. The radius of the inner edge of any bend shall not be less than six (6) times the internal diameter of the conduit where rubber covered conductors are to be installed, and not less than 10 times the internal diameter of the conduit where lead covered conductors are to be used. Long gradual sweeps will be required, rather than sharp bends, when changes of direction are necessary.
 14. EMPTY CONDUITS
 - a. TESTS: All conduits and ducts required to be installed and left empty shall be tested for clear bore and correct installation by the Contractor using a ball mandrel and a brush and snake before the installation will be accepted. The ball shall be turned to approximately 85% of the internal diameter of the raceway to be tested. Two (2) short wire brushes shall be included in the mandrel assembly. Snaking of conduits, ducts, etc., shall be performed by the Contractor in the presence of the Resident Engineer. Any conduits or ducts which reject the mandrel shall be cleared at once with the Contractor bearing all costs, such as chopping concrete, to replace the defective conduit and restore the surface to its original condition.
 - b. TAGS: Numbers or letters shall be assigned to the various conduit runs, and as they test clear they shall be identified by a fiber tag not less than 1-1/4 inch width, attached by means of a nylon cord. All conduit terminations in panel, splice or pull boxes as well as those out of the floor or ceiling shall be tagged.
 - c. TEST RECORDS: As the conduit runs clear, a record shall be kept under the heading of "Empty Conduit Tested, Left Clear, Tagged and Capped" showing conduit designation, diameter, location, date tested and by whom. When complete, this record shall be signed by the Resident Engineer and submitted in triplicate for approval. This record shall be entered on the Contract Record Drawings under Section 01 78 39, CONTRACT RECORD DOCUMENTS.
 - d. CAPPING: All empty conduit and duct openings, after test, shall be capped or plugged by the Contractor as directed.
 - e. DRAG LINES: A drag line shall be left in all empty conduit.
- B. BOXES:
1. The Contractor shall furnish and erect all pull boxes indicated on the plans or where required. Sides, top and bottom of pull boxes shall be Galvanized coated and shall be built of No. 12 USSG steel reinforced at corners by substantial angle irons and riveted or welded to plates. Bottom or side



- of pull boxes shall be removable and held in place by corrosion resistant machine screws. Pull boxes in damp locations shall have threaded hubs and gaskets and be NEMA 4X. All pull boxes shall be suspended from ceiling or walls in the most substantial manner.
2. In centering outlets, the Contractor is cautioned to allow for overhead pipes, ducts and other obstructions, and for variations in arrangement and thickness of fireproofing, soundproofing and plastering. Precaution should be exercised regarding the location of window and door trims, paneling, etc. Mistakes resulting from failure to exercise precaution must be corrected by the Contractor at no additional cost to the City. Outlets in hung ceilings shall be supported from the black iron or structure.
 3. The exact location of all outlets in finished rooms shall be as directed. When the interior finish has been applied, the Contractor shall make any necessary adjustment of its work to properly center the outlets. All outlet boxes for local switches near doors shall be located at the strike side of doors as finally hung, whether so indicated on the drawings or not.
 4. Exposed wall outlet boxes shall be erected neatly and tight against the walls and securely anchored to same.
 5. All wall outlets of each type shall be set accurately at the same level on each floor, except where otherwise specified or directed. Where special conditions occur, outlets shall be located as directed.
 6. MOUNTING HEIGHTS: The following heights are standard heights and are subject to correction due to coordination with Contract Drawings. All such changes must be approved by the Resident Engineer. Heights given are from finished floor to center line of outlet or device on wall or partition, unless otherwise indicated.
 - a. General Convenience Outlets
(mount vertical) 1'-6"
 - b. Clock Outlets 8'-6" or 1'-6" below ceiling
 - c. Wall Lighting Switches 4'-0"
 - d. Motor Controllers 5'-0"
 - e. Motor Push-button 4'-2"
 - f. Telephone Outlets As Directed
 - g. Fire Alarm Bells 8'-6" or 1'-6" below ceiling
 - h. Fire Alarm Stations 4'-0"
 - i. Intercom Outlet 1'-6"
 - j. Cooking and Refrigerator Unit As Directed
 7. Outlet boxes shall be of approved design and construction; of form and dimensions suited and adapted to its specific location; the kind of fixture to be used and the number and arrangements of conduits, etc., connecting therewith. All ferrous outlet boxes shall meet the requirements for zinc coating as specified under Electrical Conduit Systems.
 8. There shall be knockouts opened only for the insertion of conduit. Any outlet boxes with more openings than are necessary for conduit insertion shall be sealed by the Contractor without additional charge.
 9. All outlet boxes and junction boxes for exposed work shall be galvanized cast iron or cast aluminum with threaded openings. Outlet boxes for exposed inside work in damp locations shall be galvanized cast iron or cast aluminum with threaded hubs and neoprene gaskets.
 10. Junction boxes shall not be less than 4 11/16" square and shall be equipped with zinc coated plates. Where plates are exposed they shall be finished to match the room decor.



11. **FIXTURE SUPPORTS:** Outlet boxes supporting lighting fixtures shall be equipped with fixture studs held by approved galvanized stove bolts or integral with the box. Cast iron or malleable boxes shall have four (4) tapped holes for mounting required cover or fixtures.
12. Outlet boxes exposed to the weather or indicated W.P. shall be cast iron or cast aluminum and the covers made watertight with neoprene gaskets. The boxes shall have external lugs for mounting. Drilling of the body of the fitting for mounting will not be permitted. The cover screws shall be appropriate in size, non-corrodible and not less than four (4) in number for each box opening.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.3

3.3 ELECTRICAL WIRING DEVICES:

- A. **WALL SWITCHES** shall be of the best specification grade, quiet type, and shall have a rating of 20 Amperes at 277 volts, as manufactured by Bryant, Hubbell or approved equal. The mechanism shall be equipped with arc snuffers. They shall be of the tumbler type, single pole. Switches of the 3-way type shall have a similar rating.
- B. **RECEPTACLES:**
 1. **CONVENIENCE OUTLETS:** shall be of the best specification grade, duplex, two-pole, 3-wire, 20 Amperes at 125 volts. It shall have a grounding pole that shall be grounded to the conduit system. Receptacles shall be capable of both back and side wiring and shall have only one (1) grounding screw. Receptacles shall be Hubbell Cat. #5262 or approved equal.
 2. **HEAVY DUTY RECEPTACLE OUTLETS:** shall have the Ampere rating and the number of poles specified on the Contract Drawings and shall be Hubbell, Russell-Stoll, Bryant, AH & H or approved equal. Each outlet shall have a grounding pole, which shall be grounded to the conduit system.
 3. **FLOOR RECEPTACLES:** shall be Russell & Stoll #3040 or approved equal, to fit into floor box previously specified.
 4. **NAMEPLATES:** are required for all receptacles other than 120V.
- C. **CLOCK HANGERS:** Clock outlets for surface type clocks shall be equipped with a supporting hook and recessed faceplate to conceal the electrical cord.
- D. **WATERTIGHT DEVICES:** For installations exposed to weather or in damp locations, the devices shall be in a gasketed, cast iron enclosure.
- E. **PLATES:**
 1. Every convenience outlet and switch outlet shall be covered by means of a stainless steel No. 302 - 0.4" antimagnetic plate with an approved finish, unless provided otherwise in the detailed Specifications.
 2. Where two (2) or three (3) switches are grouped together, a single faceplate shall be used. Where more than three (3) switches are located at one (1) point, the faceplates may be made up in multiple units.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.4

3.4 ELECTRICAL CONDUCTORS AND TERMINATIONS:

- A. **CONDUCTORS FOR LIGHT AND POWER** - All wire and cable shall be of annealed copper of 98% conductivity. Aluminum wire or cable will not be permitted. The insulation shall be flame retardant, moisture and heat resistant, thermoplastic, type THW or THWN rated for 600 volts at 75 degrees C. for



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both wet and dry locations. Wires No. 8 or larger shall be stranded. Wires and cables shall also be subject to the requirements of the NYCEC. Cables for incoming service or wire in conduits contiguous with the earth or in concrete or other damp or wet locations shall be synthetic rubber insulated with neoprene jacket, heat and moisture resistant and shall be equal to UL Type USE and rated for 600 volts at 75 degrees C. for both wet and dry locations.

- B. **FIXTURE WIRE:** Lighting fixtures shall be wired with No. 14 gauge wire designated as AWM and rated at 105 degrees C.
- C. **OTHER TYPES:** Cables and wires for interior communication systems are described in applicable detailed Specifications.
- D. **MINIMUM SIZE:** Conductors smaller than No. 12 AWG shall not be used for light or power.
- E. **COLOR CODE:** Wires shall have a phase color code, and multiple conductor cables shall be color coded.
- F. **CABLE DATA:** The Contractor shall submit for approval the following information for each size and type of cable to be furnished.
 - 1. Manufacture of Cable - Location of Plant.
 - 2. Minimum insulation resistance at standard test temperature.
 - 3. Days required for delivery to site of work after order to proceed with manufacture.
- G. **ORIGINAL REELS:** Cable and wire shall be delivered to the site of the work on original sealed factory reels.
- H. **WIRE INSTALLATION:**
 - 1. **INSTALL WIRES AFTER PLASTERING** - Feeder and branch circuits wiring shall not be installed in conduit before the rough plastering work is completed. No conductors shall be pulled into floor conduits before floor is poured.
 - 2. **CONDUIT SECURED IN PLACE** - No conductor shall be pulled into any conduit run before all joints are made up tightly and the entire run rigidly secured in place.
 - 3. **WIRE ENDS** - All wires shall be left with sufficiently long ends for proper connection and stowing.
 - 4. **PULLING COMPOUNDS** - When required to ease the pulling-in of wires into conduit, only approved compounds as recommended by cable manufacturers shall be used.
 - 5. **PRESSURE CONNECTORS** - for wires shall be of the cast copper or forged copper pressure plate type. Connectors shall be O.Z., Burndy, National Electric Products or approved equal.
 - 6. Splices and feeder taps in the gutters of panel boxes shall be made by means of pressure plate type connectors encased in composition covers as manufactured by O.Z., Burndy, National Electric Products or approved equal.
 - 7. Splices in branch wiring for sound systems and fire systems, shall be first made mechanically secure, then soldered and taped.
 - 8. In lieu of soldered splices (except for sound and Fire Systems, which must have soldered splices) the following alternates are acceptable for operating temperatures up to 105 degrees C., for fluorescent fixtures and for the splicing of branch circuit wiring up to No. 8 AWG wire:
 - a. Mechanical splices made with mechanical connectors as manufactured by the Minnesota Manufacturing Company "Scotchlock" or approved equal. Mechanical connectors requiring a special tool (pressure connectors, insulators and locking rings) by Buchanan or approved equal. The tool used for connector application shall be as approved by the connector manufacturer.



- b. For wire and cable No. 6 AWG and larger for branch circuit wiring the seamless tubular connector will only be accepted. Application of this connector shall be with a tool recommended by the connector manufacturer.
9. TAGS: All feeders and risers shall be tagged at both ends, and in all pull and junction boxes and gutter spaces through which they pass. Such tags shall be of fiber and have the feeder designation and size stamped thereon.
10. BRANCH CIRCUIT WIRING:
 - a. The Contractor installing branch circuit wiring shall test the work for correct connections and leave all loop splices in the fixture outlet boxes properly spliced and taped. The Contractor shall provide wire ends long enough for convenient connection to device.
 - b. NEUTRALS: No common neutrals shall be used except for lighting branch circuits. Each neutral wire shall be terminated separately on a neutral busbar in the panelboard. No common neutrals will be permitted for convenience receptacle branch circuits.
- I. TERMINATIONS
 1. LUGS: All lugs for all devices and all cable terminations shall be copper. AL/CU rated lugs will not be permitted. The only exception to this requirement is when the particular device is not manufactured with copper lugs by any manufacturer. Lugs for No. 6 AWG cable and larger shall be cast copper or forged copper pressure plate type. Lugs for 1/0 and larger shall be fastened with two (2) bolts.
 2. All lugs shall be of the proper size to accept the cable connected to them. Any subcontractor furnishing a device containing lugs is to coordinate with the Contractor to insure that the device terminations are adequate for the wire or cable (whose size may be larger than expected due to voltage drop considerations) connected to the device.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.5

3.5 CIRCUIT PROTECTIVE DEVICES:

This Section sets forth the circuit protective devices such as circuit breakers and safety switches, used in connection with Motor Control Equipment, Distribution Centers, Panel boards and Service Entrance.

A. CIRCUIT BREAKERS:

1. CIRCUIT BREAKERS: shall be operable in any position and shall be of the quick-make, quick-break type on manual operation. The handle shall be trip free, preventing contacts from being held in closed position against abnormal overloads or short circuits. Positive visual indication of automatic tripped position of breaker shall be provided, in addition to the "On" and "Off" indication. All circuit breakers shall be of the bolted type.
2. TRIP RATING: Circuit breakers shall be provided with the required number of trip elements, calibrated at 40 degrees C., ambient temperature, in accordance with wire sizes or motor currents as shown on Contract Drawings or indicated in the Specifications.
3. POLE BARRIER: Multipole pole breakers shall be designed to break all poles simultaneously. They shall be provided with barriers between poles and arc suppressing devices.
4. ELEMENTS: Multipole circuit breakers shall have frames of not less than a 100 Ampere rating. Multipole circuit breakers for 480 volts AC operation shall have an NEMA interrupting rating of 18,000 Amperes, unless a higher rating is specified in the Specific Requirements or indicated on the Contract Drawings.



5. For circuit breakers with frame size up to and including 225 Amperes, the breakers may be provided with non-interchangeable trip elements. For frame ratings above 225 Amperes, the breakers shall be provided with interchangeable trip elements, which can be replaced readily.
6. Single pole circuit breakers for branch circuits shall have a frame size of no less than 100 Amperes, and shall be rated at 125 volt A.C. with a NEMA interrupting rating of 10,000 Amperes, unless a higher rating is specified in the Specifications or indicated on the Contract Drawings.
7. INVERSE TIME ACTION: The circuit breakers shall be dual element type, one (1) element with time limit characteristics, so that tripping will be prevented on momentary overloads, but will occur before dangerous values are reached and the other with instantaneous trip action. Inverse time delay action shall be effective between a minimum tripping point of 125% of rating of breaker and an instantaneous tripping point between 600% and 700% of rated current.
8. CONSTANCY OF CALIBRATION: The tripping elements shall insure constant calibration and be capable of withstanding excessive short circuit conditions without injury.
9. CONTACTS: shall be non-welding under operating conditions and of the silver to silver type.
10. TEMPERATURE RISE: Current carrying parts, except thermal elements, shall not rise in temperature in excess of 30 degrees C. while carrying rated current at rated frequency.
11. NUMBERING: Each circuit breaker shall be distinctly numbered when installed in a group with other breakers. The calibration of trip element shall be indicated on each breaker.

B. SAFETY SWITCHES:

NEMA TYPE HD: When safety switches are permitted to be used for service entrance, motor disconnecting means or to control other types of electrical equipment, they shall be of the type HD of a rating not less than 30 Amperes. Enclosures shall be provided with means for locking. For ratings above 60 Amperes terminals shall have double studs.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.6

3.6 DISTRIBUTION CENTERS:

This Section sets forth the construction and installation procedure for Switchboards, Panel boards and Cabinets.

- A. PANELBOARDS-GENERAL TYPE: The panel boards shall be of the automatic circuit breaker type with individual breakers for each circuit, removable without disturbing the other units. Circuit breakers shall be in accordance with the requirements outlined under "Circuit Protective Devices."
- B. NUMBER AND RATING OF CIRCUIT BREAKERS: The Contract Drawings show a layout of each panel, giving the number, frame, size and trip setting of circuit breakers and number of branch circuits and spare breakers. Each branch circuit shall be distinctly numbered.
- C. BUS-BAR CONSTRUCTION AND SUPPORT: Panel Boards shall be of the dead front type and shall have bus bars and branch circuits designed to suit the system and voltage. Current carrying parts, exclusive of circuit breakers shall be copper and based on a maximum density of 1,000 Amperes per square inch. Bus bars for the main switchboard shall be designed for the frame rating of the Service Breaker. Bus bars shall run up the center of the panel, unless otherwise indicated, and shall have connected thereto the various branch circuits. Unless otherwise specified, bus bars for each panel board shall be equipped with main lugs only and capacity as required on Contract Drawings. Where main protection is required, automatic circuit breakers shall be used. A neutral bus of at least the same capacity as a live bus bar shall be provided for the connection of all neutral conductors. Each terminal shall be identified. All current carrying parts, exclusive of circuit breakers, shall be of copper with a minimum number of joints. The bus bar structure shall be a self-supporting unit, firmly fastened to a ½



- inch plastic board, extending the full length and width of assembly which shall serve to insulate the bus structure from the back of panel box. Other methods affording equally effective bus structure support and insulation will be given consideration. An insulating barrier shall separate neutral bus from other parts of panel.
- D. **CIRCUIT BREAKER ASSEMBLY:** The entire circuit breaker and bus bar assembly shall be mounted on an adjustable metal base or pan and secured to the back of panel box. The panel shall have edges flanged for rigidity.
- E. **PANEL MOUNTING:** The panel shall be centered in the panel box to line up with door openings and set level and plumb so that no live parts are exposed with the door open.
- F. **PANEL CABINET:**
1. **PANEL CABINET INSTALLATION:** When installed surface mounted in panel closets they shall be mounted on Kindorf channel.
 2. Where cabinets cannot be set entirely flush due to shallow walls or partitions or where cabinet is extra deep, the protruding sides of cabinet shall be trimmed with a metal or hardwood return molding of approved design and fastened to cabinet so as to conceal the intersection between the wall and cabinet.
- G. **NAMEPLATES:** Nameplates where required, shall be made of engraved Lamicaid sheet, or approved equal. Letters and numbers shall be engraved white on a black background (except for Firehouse projects which shall have white letters on a red background). The Contractor shall submit an engraved sample for approval as to design and style of lettering before proceeding with the manufacture of the nameplate. Nameplates shall be of suitable size and shall also be provided at the top of the switchboard or section thereof and on the trim at the top of all lighting and power panels. Similar nameplates shall also be provided for each distribution circuit breaker giving the breaker number, the number of the feeder, and the name of the equipment fed.
- H. **SHOP DRAWINGS:** showing all details of boxes, panels, etc., shall be submitted for approval.
- I. **DIRECTORIES:** A directory shall be fastened with brass screws and consist of a noncorrosive metal frame with dimensions not less than five (5) inches x eight (8) inches and a transparent window of Plasticile, Plexiglass, Lucite, Polycarbonate or approved equal that is not less than 1/16 inch thick over cardboard or heavy paper. The directory shall be typewritten and show the number of each circuit, the name of circuit and lighting or equipment supplied. The size of riser feeder shall be as indicated on directory. The dimensions of directory shall be submitted for approval for each size of panel.
- J. **CONSTRUCTION**
1. **FINISH:** Panel boxes, doors and trim for installation in dry locations, shall be zinc coated after fabrication by the hot-dip galvanizing or electroplate process on inside and outside surfaces. In damp locations, panel boards shall be enclosed and gasketed NEMA 3R type. Panel boards located outdoors or exposed to the weather shall be NEMA 3X type.
 2. **PAINTING:** Panel boxes, doors and trim shall receive a coat of approved priming paint and a second coat of approved paint in the field after installation. Paint shall be applied to the inside and outside of boxes and on both sides of trim. Panel trims and doors shall receive a third or finishing coat on the outside after installation. Approval as to texture and color must be obtained before the final coat is applied.



REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.7

3.7 MOTORS:

This Section sets forth the general design, construction and performance requirements, which shall apply to all motors furnished in the Contract.

- A. **MOTOR DESIGN:** All motors shall be designed to comply with the New York State Energy Conservation Construction Code and the New York City Energy Conservation Code. In the event of any conflict or inconsistency between such codes, the New York City Energy Conservation Code shall prevail. Motors shall have standard NEMA frames and shall have nameplate ratings adequate to meet the specified conditions of operation. Motor performance under variable conditions of voltage and frequency shall be within the limits set in NEMA standards, unless modified in the Specifications. Motors shall be expressly designed for the hazard duty load, voltage and frequency as specified in the Contract. All motor windings shall be copper. All motors intended to operate on a 208 volt system shall be designed and rated for 200 volts.
- B. **STANDARDS OF COMPARISON:** In the absence of specific motor specifications, in general, the best standard products of the leading motor manufacturers shall be considered as a standard for comparison. The requirements of the NEMA standards for motors and generators shall be deemed to contain the minimum requirements of performance and design.
- C. **OBJECTIONABLE NOISES:** Objectionable noises will not be tolerated and exceptionally quiet motors may be required for certain specified locations. Noise control tests as per the New York City Construction Codes may be performed as directed by the Commissioner. Such motors shall bear a nameplate lettered "Quiet Motor." Springs and slip rings shall be of approved non-ferrous material.
- D. **BEARINGS:**
1. Bearings, unless specified otherwise, shall be of the ball or roller type. Motors one (1) horsepower and larger that are equipped with ball roller bearings shall also have lubrication of the pressure-relief greasing type. The Contractor furnishing four (4) or more such motors shall also furnish, as part of the Contract, a pressure grease gun of rugged design, of approximately 10 ounce capacity, complete with necessary adapters. The Contractor shall also provide 10 pounds of approved gun grease.
 2. For any particular unit where sleeve bearings are deemed desirable, permission for their use may be granted by the Commissioner. Motors one (1) horsepower and larger that are equipped with sleeve type bearings shall in addition to having protected accessible fittings for oiling be provided with visible means for determining normal oil level. Lubrication shall be positive, automatic and continuous.
- E. **MOTOR TERMINALS AND BOXES:** Each motor shall be furnished with flexible leads of sufficient length to extend for a distance of not less than three (3) inches beyond the face of the conduit terminal box. This box shall be furnished of ample size to make and house motor connections. These requirements shall be met irrespective of any other standards or practices. Size of cable terminals and conduit terminal box holes shall be subject to approval. For motors five (5) horsepower or larger, each terminal shall come with two (2) cast or forged copper pressure type connectors with bolts, nuts and washers. For motors of smaller ratings, connectors of other acceptable types may be furnished. For installations exposed to the weather or moist locations, terminal boxes shall be of cast iron with threaded hubs and gasketed covers. Cover screws shall be of non-corrosive material.
- F. **MOTOR TEMPERATURE RISES:** The motor nameplate temperature rises for the various types of motor enclosures shall be as listed below:
- | | |
|---|---------------|
| 1. Open Frame | 40 degrees C. |
| 2. Totally enclosed and enclosed fan cooled | 55 degrees C. |



3. Explosion proof and submersible 55 degrees C.
4. Partially enclosed and drip proof 40 degrees C.

The temperature of the various parts of a motor shall meet the requirements of NEMA standards for the size and type of the motors. Tests for heating shall be made by loading the motor to its rated horsepower and keeping it so loaded for the rated time interval or until the temperature becomes constant.

- G. SPECIAL CODE INSTALLATIONS: Electrical installations covered by special publications of NBFU and by special City rulings and regulations shall comply in design and safety features with such applicable codes, regulations and rulings, and shall be furnished and installed complete with all accessories and safety devices as therein specified.
- H. MOTORS ON LIGHTING PANELS: The largest A.C. motor permitted on branch circuits of lighting panels shall not exceed 1/4 horsepower.
- I. MOTORS RATED: 1/2 horsepower and larger shall be polyphase.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.8

3.8 MOTOR CONTROL EQUIPMENT:

This Section sets forth the requirements for motor controllers and associated devices. Such requirements are applicable to all motor control equipment furnished or installed.

- A. MANUFACTURER: All control equipment furnished under the Contract shall be the product of a single manufacturer. Exceptions to this rule may be granted in the case of controllers for fractional horsepower motors driving special equipment, the various units of which have been engineered to obtain specific performance.
- B. CONTROL ITEMS REQUIRED: The Contractor furnishing motors shall also furnish therewith complete disconnecting, starting and control equipment as required by the detailed Specifications, the various code authorities and for the successful operation of the driven equipment. These items include circuit breaker, magnetic starter with overload protection and low voltage release or protection, push button stations, pilot lights and alarms, float, pressure, temperature and limit switches, load transfer switches, devices for manual operation and speed controllers, etc. The Contractor shall furnish as many of these items as are required for the successful operation of the driven unit.
 1. Where a motor is to be located out of sight of the controller, the Contractor shall furnish an approved disconnecting means to be mounted near motor.
- C. TYPES OF STARTERS:
 1. SQUIRREL CAGE: A.C. motors of the squirrel cage type, rated from one (1) to 30 horsepower, shall have magnetic across the line starters; motors rated above 30 horsepower shall be furnished with reduced voltage (autotransformer type) starter or part winding start with time delay to reduce inrush current. Size of starters shall be based on 200V operation.
 2. SLIP RING: A.C. Motors of the slip-ring type shall be furnished with primary across the line starters interlocked with secondary starting and regulating equipment. The interlocking feature shall prevent starting of the motor when the secondary controller is off the initial starting point.
 3. MAGNETIC: For fractional horsepower motors, magnetic type starters are not required unless the particular method of controlling the driven equipment makes them necessary. Where individual single phase fractional horsepower motors or the sum of fractional horsepower motors controlled by an automatic device are 1/2 horsepower or more, magnetic starters and circuit breakers shall be used. Single phase A.C. motors smaller than 1/2 horsepower or three-phase A.C. motors smaller than one (1) horsepower where manual control is specified may be furnished with starters of toggle



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switch or push button type with inbuilt thermal protection. No additional disconnecting means is required to be furnished with this type of starter. This type of starter may also be used in series with automatic control devices such as thermostats, float and pressure switches, provided the individual motor or the sum of fractional horsepower motors is less than ½ horsepower. Means for manual operation shall be provided.

- D. **DISCONNECTING BREAKER:** All motor starters, unless otherwise specified, shall be provided with a disconnecting means in the form of a circuit breaker of the type specified under Article 3.5 **CIRCUIT PROTECTIVE DEVICES**. This disconnecting means shall be contained in the same housing with the starter and shall be operable from outside. Means shall be provided for locking the handle of the circuit breaker in the "OFF" position if it is desired to take the equipment out of service and prevent unauthorized starting.
- E. **CONTROL CABINET: DRY LOCATIONS -** All starters shall be furnished with general purpose, NEMA Type 1, sheet metal enclosures with hinged covers and baked enamel finish.
- F. **CONTROL CABINET – WATERTIGHT:** In wet locations, cast iron watertight enclosures with threaded hubs, galvanized and gasketed hinged covers shall be provided.
- G. 1. **PANELS:** Motor control devices and appliances shall be mounted on approved insulating slabs with all wiring and connections made on the back of the slabs.
2. **WIRING AND TERMINALS:** Wiring connections for currents of 100 Amperes or less may be made with copper wire or cable with special flameproof insulating coverings. Such wires shall be installed in a neat workmanlike manner, flat against the slab, and held in place by clips. Connections shall be made with pressure connectors for No. 8 AWG and larger wires, and with grommets for small stranded wires. Except for incoming and outgoing main leads, all connections shall terminate on approved connector blocks, which may be installed on the face of the slab. For small, across the line starters, the above requirements may be modified if satisfactory connections are provided.
3. **COPPER BUS:** For currents exceeding 100 Amperes, copper bus shall be used in place of wires. The bus shall be constructed of copper rods, tubing or flat strap, bent and shaped properly and securely attached to the slab in a neat and workmanlike manner. The cross section of copper shall provide sufficient areas to keep current density at not more than 1,000 Amperes per square inch.
- H. **COOPERATION:** The Contractor's subcontractor(s) who furnish electrically operated equipment shall give to the Contractor and the Contractor's electrical subcontractor full information relative to sizes and locations of apparatus furnished by them which require electrical connections.
- I. **SPARE PARTS:**
1. **FURNISH:** The Contractor shall furnish the following spare parts pertaining to equipment furnished by each subcontractor.
- One (1) set of contact fingers and springs and thermal elements for each three (3) (or fraction) of each size of magnetic contactor starter.
- One (1) holding coil for each three (3) (or fraction) of each size of magnetic contactor starter.
2. **WRAPPER MARKING:** All parts shall be delivered to the Resident Engineer neatly wrapped and boxed and plainly tagged and marked for identification and reordering.

END OF SECTION 01 35 06



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Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

No Text

GENERAL ELECTRICAL REQUIREMENTS
01 35 06 - 16



SECTION 01 35 26
SAFETY REQUIREMENTS PROCEDURES

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].
- B. The Contractor shall comply with the requirements of "*The City of New York Department of Design and Construction Safety Requirements*". This document is included in the Information for Bidders.

1.2 SUMMARY:

- A. This Section includes administrative and general procedural requirements for Safety and Health Requirements, including:
 - 1. Definitions
 - 2. Required Safety Meeting
 - 3. Compliance with Regulations
 - 4. Submittals
 - 5. Personnel Protective Equipment
 - 6. Hazardous Materials
 - 7. Emergency Suspension of Work
 - 8. Protection of Personnel
 - 9. Environmental Protection

1.3 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.4 REQUIRED SAFETY MEETINGS:

- A. Prior to commencing construction, the Resident Engineer will schedule and hold a preconstruction kick-off meeting either at DDC's main office or at the Project site with representatives of the Contractor, including the principal on-site project representative and one or more safety representatives, Commissioner's designated representatives and other concerned parties for the purpose of reviewing the Contract Safety requirements. The Contractor's safety requirements shall be reviewed, and implementation of safety provisions pertinent to the Work shall be discussed.
- B. The Contractor is responsible for conducting weekly documented jobsite safety meetings, given to all jobsite personnel including all subcontractors on the project, with the purpose of discussing safety topics and job specific requirements at the DDC worksite.

1.5 COMPLIANCE WITH REGULATIONS:

- A. The Work, including contact with or handling of hazardous materials, disturbance or dismantling of structures containing hazardous materials, and disposal of hazardous materials, shall comply with the applicable requirement for CFR Parts 1910 and 1926, and 40 CFR, Parts 61, 261, 761 and 763.
- B. Work involving disturbance or dismantling of asbestos or asbestos containing materials, demolition of structures containing asbestos and removal of asbestos, shall comply with 40 CFR Part 61, Subparts A and M, and 40 CFR Part 763, as applicable.
- C. Work shall additionally comply with all applicable federal, state and local safety and health regulations.
- D. In case of a conflict between applicable regulations, the more stringent requirements shall apply.
- E. All workers working on the DDC project site are required by NYC Local Law 41 to complete the OSHA 10 –hour training course.

1.6 SUBMITTALS:

- A. The Contractor shall submit, to the Resident Engineer, copies of the Safety Program, Site Safety Plan and other required documentation in accordance with the *"New York City Department of Design and Construction Safety Requirements."*
- B. Permits: If hazardous materials are disposed of off-site submit copies of shipping manifests and permits from applicable federal, state or local authorities and disposal facilities, and submit certificates that the material has been disposed of in accordance with regulations to the Resident Engineer.
- C. Accident Reporting: Submit a copy of each accident report to the Resident Engineer in accordance with the *"New York City Department of Design and Construction Safety Requirements."*
- D. All Asbestos and Lead project regulatory notifications are to be submitted to DDC's Bureau of Environmental and Geotechnical Services (BEGS) through the Resident Engineer.
- E. Request for Subcontractor Approval: Any subcontractor performing environmental work shall submit required documentation for approval to perform such work as required by DDC's BEGS.

PART II – PRODUCTS

2.1 PERSONNEL PROTECTIVE EQUIPMENT:

Special facilities, devices, equipment and similar items used by the Contractor in execution of the Work shall comply with 29 CFR Part 1910, subpart I, Part 1926, subpart E and other applicable regulations.

2.2 HAZARDOUS MATERIALS:

- A. The Contractor shall bring to the attention of the Commissioner, any material encountered during execution of the Work that the Contractor suspects to be hazardous.
- B. The Commissioner shall determine whether the Contractor shall perform tests to determine if the material is hazardous. A change to the Contract price may be provided, subject to the applicable provisions of the Contract.
- C. If the material is found to be hazardous, the Commissioner may direct the Contractor to remediate the hazard and a change to the Contract price may be provided, subject to the applicable provisions of the Contract.



PART III – EXECUTION

3.1 EMERGENCY SUSPENSION OF WORK:

- A. When the Contractor is notified by the Commissioner of noncompliance with the safety provisions of the Contract, the Contractor shall immediately, unless otherwise instructed, correct the unsafe condition, at no additional cost to the City.
- B. If the Contractor fails to comply promptly, all or part of the Work may be stopped by notice from the Commissioner.
- C. When, in the opinion of the Commissioner, the Contractor has taken satisfactory corrective action, the Commissioner shall provide written notice to the Contractor that work may resume.
- D. The Contractor shall not be allowed any extension of time or compensation for damages in connection with a work stoppage for an unsafe condition.

3.2 PROTECTION OF PERSONNEL:

- A. The Contractor shall take all necessary precautions to prevent injury to the public, occupants, or damage to property of others. The public and occupants includes all persons not employed by the Contractor or a subcontractor.
- B. Whenever practical, the work area shall be fenced, barricaded or otherwise blocked off from the Public or occupants to prevent unauthorized entry into the work area, in compliance with the requirements of Section 01 50 00, TEMPORARY FACILITIES, SERVICES AND CONTROLS, and including, without limitation, the following:
 - 1. Provide traffic barricades and traffic control signage where construction activities occur in vehicular areas.
 - 2. Corridors, aisles, stairways, doors and exit ways shall not be obstructed or used in a manner to encroach upon routes of ingress or egress utilized by the public or occupants, or to present an unsafe condition to the public or occupants.
 - 3. Store, position and use equipment, tools, materials, scraps and trash in a manner that does not present a hazard to the public or occupant by accidental shifting, ignition or other hazardous activity.
 - 4. Store and transport refuse and debris in a manner to prevent unsafe and unhealthy conditions for the public and occupants. Cover refuse containers, and remove refuse on a frequent regular basis acceptable to the Resident Engineer. Use tarpaulins or other means to prevent loose transported materials from dropping from trucks or other vehicles.

3.3 ENVIRONMENTAL PROTECTION:

- A. Dispose of solid, liquid and gaseous contaminants in accordance with local codes, laws, ordinances and regulations.
- B. Comply with applicable federal, state and local noise control laws, ordinances and regulations, including but not limited to 29 CFR 1910.95, 29 CFR 1926.52 and NYC Administrative Code Chapter 28 of Title 15.

END OF SECTION 01 35 26



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Division 01 – DDC STANDARD GENERAL CONDITIONS
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SAFETY REQUIREMENTS PROCEDURES
01 35 26 - 4



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**SECTION 01 35 91
HISTORIC TREATMENT PROCEDURES**

REFER TO THE ADDENDUM FOR APPLICABILITY OF THIS SECTION 01 35 91

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes administrative and procedural requirements for the treatment of Landmark Structures and Landmark Quality Structures, as identified in the Addendum. Specific requirements are indicated in other sections of the Specifications.
- B. This Section includes, without limitation, the following:
1. Storage and protection of existing historic materials.
 2. Temporary protection of historic materials during construction.
 3. General Protection
 4. Protection during use of heat-generating equipment.
 5. Photographic Documentation
 6. NYC Landmarks Preservation Commission Final Approval signoffs.

1.3 RELATED SECTIONS: include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 32 33 PHOTOGRAPHIC DOCUMENTATION
- C. Section 01 33 00 SUBMITTAL PROCEDURES
- D. Section 01 77 00 CLOSEOUT PROCEDURES
- E. Section 01 78 39 CONTRACT RECORD DOCUMENTS

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- C. Landmark Structure or Site: Any building or site which has been designated as a landmark, or any building or site within a landmark district, as designated by the New York City Landmarks Preservation Commission or the New York State Historic Preservation Office.



- D. **Landmark Quality Structure:** Any building which has been determined by the City to be of landmark quality and/or historical significance
- E. **Preservation:** To apply measures necessary to sustain the existing form, integrity, and materials of a historic property. Work may include preliminary measures to protect and stabilize the property.
- F. **Rehabilitation:** To make possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.
- G. **Restoration:** To accurately depict the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and the reconstruction of missing features from the restoration period.
- H. **Reconstruction:** To reproduce in the exact form and detail a building, structure, or artifact as it appeared at a specific period in time.
- I. **Stabilize:** To apply measures designed to reestablish a weather-resistant enclosure and the structural reinforcement of an item or portion of the building while maintaining the essential form as it exists at present.
- J. **Protect and Maintain:** To remove deteriorating corrosion, reapply protective coatings, and install protective measures such as temporary guards; to provide the least degree of intervention.
- K. **Repair:** To stabilize, consolidate, or conserve; to retain existing materials and features while employing as little new material as possible. Repair includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials. Within restoration, repair also includes limited replacement in kind, rehabilitation, and reconstruction, with compatible substitute materials for deteriorated or missing parts of features when there are surviving prototypes.
- L. **Replace:** To duplicate and replace entire features with new material in kind. Replacement includes the following conditions:
 - 1. **Duplication:** Includes replacing elements damaged beyond repair or missing. Original material is indicated as the pattern for creating new duplicated elements.
 - 2. **Replacement with New Materials:** Includes replacement with new material when original material is not available as patterns for creating new duplicated elements.
 - 3. **Replacement with Substitute Materials:** Includes replacement with compatible substitute materials. Substitute materials are not allowed, unless otherwise indicated.
- M. **Remove:** To detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- N. **Remove and Salvage:** To detach items from existing construction and deliver them to the City ready for reuse.
- O. **Remove and Reinstall:** To detach items from existing construction, repair and clean them for reuse, and reinstall them where indicated.
- P. **Existing to Remain or Retain:** Existing items of construction that are not to be removed and that are not otherwise indicated to be removed and salvaged, or removed and reinstalled.



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- Q. Material in Kind: Material that matches existing materials, as much as possible, in species, cut, color, grain, and finish.

1.5 SUBMITTALS:

- A. Historic Treatment Program: Submit a written plan for each phase or process, including protection of surrounding materials during operations. Describe in detail materials, methods, and equipment to be used for each phase of work.
- B. Alternative Methods and Materials: If alternative methods and materials to those indicated are proposed for any phase of work, submit for Commissioner's approval a written description including evidence of successful use on other comparable projects, and program of testing to demonstrate effectiveness for use on this Project.
- C. Qualification Data: For historic treatment specialists as specified and required by individual sections of the project specifications.
- D. Photographs for Designated Landmark Structures: Submit photographs in accordance with Section 01 32 33, PHOTOGRAPHIC DOCUMENTATION and as described in this section.
- E. Record Documents: Include modifications to manufacturer's written instructions and procedures, as documented in the historic treatment preconstruction conference and as the Work progresses.

1.6 QUALITY ASSURANCE:

- A. Special Experience Requirements: Special Experience Requirements may apply to the firm that will provide Historic Treatment Services. If applicable, such Special Experience Requirements are set forth in the Bid Booklet and the Addendum.
- B. Historic Treatment Preconstruction Conference: The Resident Engineer will schedule and hold a preconstruction meeting at the site in accordance with Section 01 31 00, PROJECT MANAGEMENT AND COORDINATION.
 - 1. Review manufacturer's written instructions for precautions and effects of products and procedures on building materials, components, and vegetation.
 - a. Record procedures established as a result of the review and distribute to affected parties.

1.7 STORAGE AND PROTECTION OF HISTORIC MATERIALS:

- A. Removed and Salvaged Historic Materials: As specified and required by individual sections of the project specifications.
- B. Removed and Reinstalled Historic Materials: As specified and required by individual sections of the project specifications.
- C. Existing Historic Materials to Remain: Protect construction indicated to remain against damage and soiling during historic treatment. When permitted by the Commissioner, items may be removed to a suitable, protected storage location during historic treatment and reinstalled in their original locations after historic treatment operations are complete.
- D. Storage and Protection: When removed from their existing location, store historic materials, at a location acceptable to the Commissioner, within a weather tight enclosure where they are protected from wetting by rain, snow, or ground water, and temperature variations. Secure stored materials to protect from theft.
 - 1. Identify removed items with an inconspicuous mark indicating their original location.



PART II – PRODUCTS (Not Used)

PART III – EXECUTION

3.1 PROTECTION, GENERAL:

- A. Comply with manufacturer's written instructions for precautions and effects of products and procedures on adjacent building materials, components, and vegetation.
- B. Ensure that supervisory personnel are present when work begins and during its progress.
- C. Temporary Protection of Historic Materials during Construction:
 - 1. Protect existing materials during installation of temporary protections and construction. Do not deface or remove existing materials.
 - 2. Attachments of temporary protection to existing construction shall be approved by the Commissioner prior to installation.
- D. Protect landscape work adjacent to or within work areas as follows:
 - 1. Provide barriers to protect tree trunks.
 - 2. Bind spreading shrubs.
 - 3. Use coverings that allow plants to breathe and remove coverings at the end of each day. Do not cover plant material with a waterproof membrane for more than 8 hours at a time.
 - 4. Set scaffolding and ladder legs away from plants.
- E. Existing Drains: Prior to the start of work or any cleaning operations, test drains and other water removal systems to ensure that drains and systems are functioning properly. Notify Commissioner immediately of drains or systems that are stopped or blocked. Do not begin Work of this Section until the drains are in working order.
 - 1. Provide a method to prevent solids, including stone or mortar residue, from entering the drains or drain lines. Clean out drains and drain lines that become blocked or filled by sand or any other solids because of work performed under this Contract.
 - 2. Protect storm drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

3.2 PROTECTION DURING USE OF HEAT-GENERATING EQUIPMENT:

- A. No roofing work requiring the use of an open flame shall be permitted on any Landmark Structure or any Landmark Quality Structure, whose roof or wall structure is made of wood or primarily of wood.
- B. Comply with the following procedures while performing work with heat-generating equipment, including welding, cutting, soldering, brazing, paint removal with heat, and other operations where open flames or implements utilizing heat are used:
 - 1. Obtain Commissioner's approval for operations involving use of open-flame or welding equipment. Notification shall be given for each occurrence and location of work with heat-generating equipment.
 - 2. As far as practical, use heat-generating equipment in shop areas or outside the building.
 - 3. Before work with heat-generating equipment commences, furnish personnel to serve as a fire watch (or watches) for location(s) where work is to be performed.



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4. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
 5. Remove and keep the area free of combustibles, including, rubbish, paper, waste, etc., within area of operations.
 6. If combustible material cannot be removed, provide fireproof blankets to cover such materials.
 7. Where possible, furnish and use baffles of metal or gypsum board to prevent the spraying of sparks or hot slag into surrounding combustible material.
 8. Prevent the extension of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
 9. Inspect each location of the day's work not sooner than 30 minutes after completion of operations to detect hidden or smoldering fires and to ensure that proper housekeeping is maintained.
- C. Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to automatic sprinkler heads, shield the individual heads temporarily with guards.

3.3 PHOTOGRAPHIC DOCUMENTATION:

Photographs for Designated Landmark Structures: Show existing conditions prior to any historic treatments, including one overall photograph and two close-up photographs of all areas of work affected. Show one overall photograph and two close-up photographs of all areas of work after the successful execution of all historical treatments.

3.4 NEW YORK CITY LANDMARKS PRESERVATION COMMISSION FINAL APPROVALS SIGNOFF:

For all projects involving a Landmark Structure or Site, the Contractor, at the completion of the work, shall submit to the Commissioner, in accordance with Section 01 78 39, CONTRACT RECORD DOCUMENTS, all documentation concerning the successful execution of all historic treatments. This shall include, but not be limited to, copies of all before and after photographs of historic treatments, one copy of the Contractor's as-built drawings, copies of testing and analysis results, including cleaning, mortar analysis, pointing mortars and all other information pertaining to work performed under the New York City Landmarks Preservation Commission jurisdiction.

END OF SECTION 01 35 91



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Division 01 – DDC STANDARD GENERAL CONDITIONS
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HISTORIC TREATMENT PROCEDURES
01 35 91 - 6



SECTION 01 40 00
QUALITY REQUIREMENTS

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes the following:
- a. Definitions
 - b. Conflicting Requirements
 - c. Quality Assurance
 - d. Quality Control
 - e. Approval of Materials
 - f. Special Inspections (Controlled Inspection)
 - g. Inspections by Other City Agencies
 - h. Certificates of Approval
 - i. Acceptance Tests
 - j. Repair and Protection
- B. This Section includes administrative and procedural requirements for quality control to assure compliance with quality requirements specified in the Contract Documents.
- C. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
- D. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
- E. Provisions of this Section do not limit requirements for the Contractor to provide quality-assurance and -control services required by the Commissioner or authorities having jurisdiction.
- F. Specific test and inspection requirements are specified in the individual sections of the Specifications.
- G. LEED: Refer to the Addendum to identify whether this project is designed to comply with a Certification Level according to the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Rating System, as specified in Section 01 81 13, "SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS."
- H. COMMISSIONING: Refer to the Addendum to identify whether this project will be Commissioned by an independent third party under separate contract with the City of New York. Commissioning shall be in accordance with ASHRAE and USGBC LEED-NC procedures, as described in Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS. The Contractor shall cooperate with the commissioning agent and provide whatever assistance is required.



1.3 RELATED SECTIONS: Include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 31 00 PROJECT MANAGEMENT AND COORDINATION
- C. Section 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION
- D. Section 01 33 00 SUBMITTAL PROCEDURES
- E. Section 01 77 00 CLOSEOUT PROCEDURES
- F. Section 01 78 39 CONTRACT RECORD DOCUMENTS

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- C. Commissioning: A Total Quality Assurance process that includes checking the design and installation of equipment, as well as performing functional testing of the same to confirm that the installed equipment is operating and in conformance with the Contract Documents and the City's requirements.

1.5 CONFLICTING REQUIREMENTS:

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, the Contractor shall comply with the most stringent requirement as determined by the Commissioner. The Contractor shall refer any uncertainties and/or conflicting requirements to the Commissioner for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. The Contractor shall refer any uncertainties to the Commissioner for a decision before proceeding.

1.6 QUALITY ASSURANCE:

- A. General: Qualifications paragraphs in this Sub-Section establish the minimum qualification levels required. Individual Specification Sections specify additional requirements.
- B. Installer Qualifications: Special Experience Requirements may apply to the firm that will install, erect or assemble specified work required for the Project. If applicable, such Special Experience Requirements are set forth in the Bid Booklet and the Addendum.
- C. Manufacturer Qualifications: Special Experience Requirements may apply to the firm that will manufacture equipment, products or systems specified for the Project. If applicable, such Special Experience Requirements are set forth in the Bid Booklet and the Addendum.



- D. Fabricator Qualifications: Special Experience Requirements may apply to the firm that will fabricate material, products or systems specified for the Project. If applicable, such Special Experience Requirements are set forth in the Bid Booklet and the Addendum
- E. Professional Engineer Qualifications: A professional engineer who is licensed to practice in the State of New York and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.
- F. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- G. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by the Resident Engineer.
 - 2. Notify Resident Engineer seven (7) days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain Design Consultant's approval of mockups before starting work, fabrication, or construction.
 - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 6. Demolish and remove mockups when directed, unless otherwise directed or indicated.

1.7 QUALITY CONTROL:

- A. City's Responsibilities: Where quality-control services are indicated as the City's responsibility in the Specifications, the City will engage a qualified testing agency to perform these services.
 - 1. COST OF TESTS BORNE BY THE CITY: Where the City directs tests to be performed to determine compliance with the Specifications regarding materials or equipment, and where such compliance is ascertained as a result thereof, the City will bear the cost of such tests.
 - 2. The City will furnish the Contractor with names, addresses, and telephone numbers of testing entities engaged and a description of the types of testing and inspecting they are engaged to perform.
 - 3. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to the Contractor.
- B. Contractor's Responsibility: Tests and inspections not explicitly assigned to the City are the Contractor's responsibility. Unless otherwise indicated, the Contractor shall provide quality-control services as set forth in the Specifications and those required by Authorities having jurisdiction. The Contractor shall provide quality-control services required by Authorities having jurisdiction, whether specified or not.
 - 1. COST OF TESTS BORNE BY CONTRACTOR – In the case of tests which are specifically called for in the Specifications to be provided by the Contractor or tests which are required by any Authority having jurisdiction, but are not indicated as the responsibility of the City, the cost thereof shall be borne by the Contractor and shall be deemed to be included in the Contract price. The Contractor shall reimburse the City for expenditures incurred in providing tests on materials and equipment submitted by the Contractor as the equivalent of that specifically named in the Specifications and rejected for non-compliance.
 - 2. Where services are indicated as Contractor's responsibility, the Contractor shall engage a qualified testing agency to perform these quality-control services. Any testing agency engaged by the Contractor to perform quality control services is subject to prior approval by the Commissioner.



3. The Contractor shall not employ same entity engaged by the City, unless agreed to in writing by the Commissioner.
 4. The Contractor shall notify testing agencies and the Resident Engineer at least 72 hours in advance of the date and time for the performance of Work that requires testing or inspecting.
 5. Where quality-control services are indicated as Contractor's responsibility, the Contractor shall submit a certified written report, in triplicate to the Commissioner, of each quality-control service.
 6. Testing and inspecting requested by the Contractor and not required by the Contract Documents are Contractor's responsibility.
 7. The Contractor shall submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, the Contractor shall engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Results shall be submitted in writing as specified in Section 01 33 00 SUBMITTAL PROCEDURES.
- D. **Retesting/Re-inspecting:** Regardless of whether the original tests or inspections were the Contractor's responsibility, the Contractor shall provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. **Associated Services:** The Contractor shall cooperate with entities performing required tests, inspections, and similar quality-control services, and shall provide reasonable auxiliary services as requested. The Contractor shall notify the testing agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist testing entity in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing entities.
 6. Design mix proposed for use for material mixes that require control by the testing entity.
 7. Security and protection for samples and for testing and inspecting equipment at the Project site.
- F. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
 2. Coordinate and cooperate with the Commissioning Authority/Agent as applicable for start-up, inspection and functional testing in the implementation of the Commissioning Plan.
- G. **Manufacturer's Directions:** Where the Specifications provide that the manufacturer's directions are to be used, such printed directions shall be submitted to the Commissioner.
- H. **Inspection of Material:** In the event that the Specifications require the Contractor to engage the services of an entity to witness and inspect any material especially manufactured or prepared for use in or part of the permanent construction, such entity shall be subject to prior written approval by the Commissioner.
1. **NOTICE** - The Contractor shall give notice in writing to the Commissioner sufficiently in advance of its intention to commence the manufacture or preparation of materials especially manufactured or prepared for use in or as part of the permanent construction. Such notice shall contain a request for inspection, the date of commencement and the expected date of completion of the manufacture or preparation of materials. Upon receipt of such notice, the Commissioner will arrange to have a representative present at such times during the manufacture as may be necessary to inspect the materials, or the Commissioner will notify the Contractor that the inspection will be made at a point



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other than the point of manufacture, or the Commissioner will notify the Contractor that inspection will be waived.

- I. No Shipping Before Inspection: The Contractor shall comply with the foregoing before shipping any material.
- J. Certificate of Manufacture: When the Commissioner so requires, the Contractor shall furnish to the Commissioner authoritative evidence in the form of Certificates of Manufacture that the materials to be used in the work have been manufactured and tested in conformity with the Specifications. These certificates shall include copies of the results of physical tests and chemical analyses where necessary, that have been made directly on the product, or on similar products being fabricated by the manufacturer. This may include such approvals as B.S.A., M.E.A., B.E.C. Advisory Board, etc.
- K. Acceptance: When materials or manufactured products shall comprise such quantity that it is not practical to make physical tests or chemical analyses directly on the product furnished, a certificate stating the results of such tests or analyses of similar materials which were concurrently produced may, at the discretion of the Commissioner, be considered as the basis for the acceptance of such material or manufactured product.
- L. Testing Compliance: The testing personnel shall make the necessary inspections and tests, and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Specifications, indicating thereon all analyses and/or test data and interpreted results thereof.
- M. Reports: Six (6) copies of the reports shall be submitted and authoritative certification thereof must be furnished to the Commissioner as a prerequisite for the acceptance of any material or equipment.
- N. Rejections: If, in making any test, it is ascertained by the Commissioner that the material or equipment does not comply with the Specifications, the Contractor will be notified thereof, and will be directed to refrain from delivering said materials or equipment, or to promptly remove it from the site or from the work and replace it with acceptable material at no additional cost to the City.
- O. Furnish Designated Materials: Upon rejection of any material or equipment submitted as the equivalent of that specifically named in the Specifications, the Contractor shall immediately proceed to furnish the designated material or equipment.

1.8 APPROVAL OF MATERIALS:

- A. Local Laws: All materials, appliances and types or methods of construction shall be in accordance with the Specifications and shall in no event be less than that necessary to conform to the requirements of the New York City Construction Codes, Administrative Code and Charter of the City of New York.
- B. Approval of Manufacturer: The names of proposed manufacturers, material suppliers, and dealers who are to furnish materials, fixtures, equipment, appliances or other fittings shall be submitted to the Commissioner for approval, as early as possible, to afford proper review and analysis. No manufacturer will be approved for any materials to be furnished under the Contract unless it shall have a plant of ample capacity and shall have successfully produced similar products. All approvals of materials or equipment that are legally required by the New York City Construction Codes and other governing Authorities must be obtained prior to installation.
- C. All Materials: Fixtures, fittings, supplies and equipment furnished under the Contract shall be new and unused, except as approved by the Commissioner, and of standard first-grade quality and of the best workmanship and design. The City of New York encourages the use of recycled products where practical.
- D. INFORMATION TO SUPPLIERS - In asking for prices on materials under any item of the Contract, the Contractor shall provide the manufacturer or dealer with such complete information from the

Specifications and Contract Drawings as may in any case be necessary, and in every case the Contractor shall inform the manufacturer or dealer of all the General Conditions and requirements herein contained.

1.9 SPECIAL INSPECTIONS:

A. SPECIAL INSPECTIONS:

1. Inspection of selected materials, equipment, installation, fabrication, erection or placement of components and connections made during the progress of the Work to ensure compliance with the Contract Documents and provisions of the New York City Construction Codes, shall be made by a Special Inspector. The City of New York will retain the services of the Special Inspector and bear the costs for the performance of Special Inspections in compliance with NYC Construction Codes requirements or as additionally may be called for in the project specifications, except as noted below for Form TR-3: Technical Report for Concrete Design Mix. The Special Inspector shall be an entity compliant with the requirements of the New York City Construction Codes. The Contractor shall notify the relevant Special Inspector in writing at least 72 hours before the commencement of any work requiring special inspection.
2. Form TR3: Technical Report Concrete Design Mix: The contractor shall be responsible for, and bear all costs associated with the filing and securing of approvals, if any, for Form TR3: Technical Report Concrete Design Mix, including, but not limited to, engaging the services of a New York City licensed Concrete Testing Lab for the review and approval of concrete design mix, testing, signatures and professional seals, etc., compliant with NYC Department of Buildings requirements, for each concrete design mix.
3. The Contractor shall notify the relevant Special Inspector in writing at least 72 hours before the commencement of any work requiring Special Inspection. The contractor shall be responsible for, and bear related costs to assure that all construction or work shall remain accessible and exposed for inspection purposes until the required inspection is completed.
4. Inspections and tests performed under "Special Inspection" shall not relieve the Contractor of the responsibility to comply with the Contract Documents, and that there is no warranty given to the Contractor by the City of New York in connection with such inspection and tests or certifications made under "Special Inspections".
5. The contractor must coordinate with the Resident Engineer or DDC Project Manager to provide access and schedule the work for inspection by the Special Inspector.

1.10 INSPECTIONS BY OTHER CITY AGENCIES:

- A. Letter of Completion: Just prior to substantial completion of this Project, the Commissioner will file with the Department of Buildings, an application for a Letter of Completion or a Certificate of Occupancy for the structure.
- B. Final Inspections: In connection with the above mentioned application for a Letter of Completion or a Certificate of Occupancy and before certificates of final payments are issued, the Contractor will be required to arrange for all final inspections by the inspection staff of the Department of Buildings, Fire Department or other Governmental Agencies having jurisdiction, and secure all reports, sign offs, certificates, etc., by such inspection staff or other governmental agencies, in order that a Letter of Completion or Certificate of Occupancy can be issued promptly.

1.11 CERTIFICATES OF APPROVAL:

- A. Responsibility: The Contractor shall be responsible for and shall obtain all final approvals for the work installed under the Contract in the form of such certificates that are required by all governmental agencies having jurisdiction over the work of the Contract.
- B. Transmittal: All such certificates shall be forwarded to the Commissioner through the Resident Engineer.



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1.12 ACCEPTANCE TESTS:

- A. Government Agencies: All equipment and appliances furnished and installed under the Contract shall conform to the requirements of the Specifications, and shall in no event be less than that necessary to comply with the minimum requirements of the law and all of the governmental agencies having jurisdiction.
- B. Notice of Tests: Whenever the Specifications and/or any governmental agency having jurisdiction requires the acceptance test, the Contractor shall give written notice to all concerned of the time when these tests will be conducted.
- C. Energy: The City will furnish all energy, fuel, water and light required for tests.
- D. Labor and Materials: The Contractor shall furnish labor and all other material and instruments necessary to conduct the acceptance tests at no additional cost to the City.
- E. Certificates: The final acceptance by the Commissioner shall be contingent upon the Contractor delivering to the Commissioner all necessary certificates evidencing compliance in every respect with the requirements of the regulatory agencies having jurisdiction.
- F. Results: If the results of tests and Special Inspections indicate that the material or procedures do not meet requirements as set forth on the Contract Drawings or in the Specifications or are otherwise unsatisfactory, the Contractor shall only proceed as directed by the Resident Engineer. Additional costs resulting from retesting, re-inspecting, replacing of material and/or damage to the work and any delay caused to the schedule shall be borne by the Contractor.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, the Contractor shall repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

END OF SECTION 01 40 00



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**SECTION 01 42 00
REFERENCES**

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 DEFINITIONS:

REFER TO THE ADDENDUM, Article IX, FOR ADDITIONAL DEFINITIONS AND REVISIONS TO THE CONTRACT AND SPECIFICATIONS

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. "APPROVED," ETC. - "Approved," "acceptable," "satisfactory," and words of similar import shall mean and intend approved, acceptable or satisfactory to the Commissioner.
- C. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- D. "DIRECTED," "REQUIRED," ETC.- Wherever reference is made in the Contract to the work or its performance, the terms "directed," "required," "permitted," "ordered," "designated," "prescribed," "determined," and words of similar import shall, unless expressed otherwise, imply the direction, requirements, permission, order, designation or prescription of the Commissioner.
- E. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings.

1.3 CODES, AGENCIES AND REGULATIONS:

A.D.A.A.G.	Americans with Disabilities Act (ADA) – Architectural Barriers Act (ABA)
B.G. & E.	Bureau of Gas and Electricity of the City of New York
B.S. & A.	New York City Board of Standards and Appeals
DOE	Department of Energy
E.C.C.C.N.Y.S.	Energy Conservation Construction Code of New York State
EPA	Environmental Protection Administration
N.Y.C.C.C.	New York City Construction Codes – includes: New York City Plumbing Code New York City Building Code New York City Mechanical Code New York City Fuel Gas Code
N.Y.S.D.O.L	New York State Department of Labor
N.Y.C.D.E.P	New York City Department of Environmental Protection
N.Y.C.E.C.	New York City Electrical Code
N.Y.C.E.C.C	New York City Energy Conservation Code
N.Y.C.F.C	New York City Fire Code
N.Y.S...D.E.C.	New York State Department of Environmental Conservation
O.S.H.A.	Occupational Safety & Health Administration

1.4 INDUSTRY STANDARDS:

- A. STANDARD REFERENCES – Unless otherwise specifically indicated in the Contract Documents, whenever reference is made to the furnishing of materials or testing thereof that conforms to the standards of any technical society, organization or body, it shall be construed to mean the latest standard, code, specification adopted and published by that technical society, organization or body, as of the date of the bid opening, unless the provisions of the New York City Construction Codes adopt a different or earlier dated version of such standard.
- B. APPLICABILITY OF STANDARDS: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect, to the extent referenced, as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference.
- C. CONFLICTING REQUIREMENTS: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantity or quality, comply with the most stringent requirements. Immediately refer uncertainties, and requirements that are different but apparently equal, to the Commissioner in writing for a decision before proceeding.
- D. STANDARD SPECIFICATIONS - When no reference is made to a code, standard or specification, the Standard Specifications of the ASTM or the AIEE, as the case may be, shall govern.
- E. REFERENCES - Reference to a technical society, organization or body may be made in the Specifications by abbreviations. Abbreviations and acronyms used in the Specifications and other Contract Documents mean the associated name. The following names are subject to change and are



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believed, but are not assured, to be accurate and up-to-date as of the Issue Date of the Contract Documents.

AA	Aluminum Association, Inc. (The)
AAADM	American Association of Automatic Door Manufacturers
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists (The)
ABAA	Air Barrier Association of America
ABMA	American Bearing Manufacturers Association
ACI	ACI International (American Concrete Institute)
ACPA	American Concrete Pipe Association
AEIC	Association of Edison Illuminating Companies, Inc. (The)
AF&PA	American Forest & Paper Association
AGA	American Gas Association
AGC	Associated General Contractors of America (The)
AGMA	American Gear Manufacturer Association
AHA	American Hardboard Association (Now part of CPA)
AHAM	Association of Home Appliance Manufacturers
AI	Asphalt Institute
AIA	American Institute of Architects (The)
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)

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ALSc	American Lumber Standard Committee, Incorporated
ALI	Automotive Lift Institute
AMCA	Air Movement and Control Association International, Inc.
ANSI	American National Standards Institute
AOSA	Association of Official Seed Analysts, Inc.
APA	APA - The Engineered Wood Association
APA	Architectural Precast Association
API	American Petroleum Institute
ARI	Air-Conditioning & Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASA	American Standards Association
ASAE	American Society of Agricultural Engineers
ASCE/SEI	American Society of Civil Engineers, Structural Engineering Institute
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	ASTM International (American Society for Testing and Materials International)
AWCI	AWCI International (Association of the Wall and Ceiling Industry International)
AWCMA	American Window Covering Manufacturers Association (Now WCSC)
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWSC	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association (The)

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BICSI	BICSI
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International)
BISSC	Baking Industry Sanitation Standards Committee
CIBSE	Chartered Institute of Building Services Engineers
CCC	Carpet Cushion Council
CDA	Copper Development Association
CEA	Canadian Electricity Association
CEFFA	Chemical Fabrics & Film Association, Inc.
CGA	Compressed Gas Association
CGSB	Canadian General Standards Board
CIMA	Cellulose Insulation Manufacturers Association
CIPRA	Cast Iron Pipe Research Association
CISCA	Ceilings & Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CPA	Composite Panel Association
CPPA	Corrugated Polyethylene Pipe Association
CPSC	Consumer Product Safety Commission
CRI	Carpet & Rug Institute (The)
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Association
CSI	Cast Stone Institute
CSI	Construction Specifications Institute (The)
CSSB	Cedar Shake & Shingle Bureau
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute)



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DASMA	Door and Access Systems Manufacturer's Association International
DHI	Door and Hardware Institute
DOC	U.S. Department of Commerce – National Institute of Standards and Technology
EIA	Electronic Industries Alliance
DOJ	U.S. department of Justice
EIMA	EIFS Industry Members Association
DOL	U.S. Department of labor
EJCDC	Engineers Joint Contract Documents Committee
DOTn	U.S. Department of Transportation
EN	European Committee of Standards
EJMA	Expansion Joint Manufacturers Association, Inc.
ESD	ESD Association
EVO	Efficiency Valuation Organization
FEME	Federal Emergency Management Agency
FIBA	Federation Internationale de Basketball Amateur (The International Basketball Federation)
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation)
FMG	FM Global (Formerly: FM - Factory Mutual System)
FMRC	Factory Mutual Research (Now FMG)
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.
FSA	Fluid Sealing Association
FSC	Forest Stewardship Council
GA	Gypsum Association
GANA	Glass Association of North America
GRI	(Now GSI)
GS	Green Seal
GSI	Geosynthetic Institute

REFERENCES
01 42 00 -6



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HI	Hydraulic Institute
HI	Hydronics Institute
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)
HPVA	Hardwood Plywood & Veneer Association
HPW	H. P. White Laboratory, Inc.
HUD	U.S. Department of Housing and Urban Development
IAPMO	International Association of Plumbing and Mechanical Officials
IAS	International Approval Services (Now CSA International)
IBF	International Badminton Federation
ICC	International Code Council, Inc.
ICEA	Insulated Cable Engineers Association, Inc.
ICRI	International Concrete Repair Institute, Inc.
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The)
IESNA	Illuminating Engineering Society of North America
IEST	Institute of Environmental Sciences and Technology
IGCC	Insulating Glass Certification Council
IGMA	Insulating Glass Manufacturers Alliance
ILI	Indiana Limestone Institute of America, Inc.
ISO	International Organization for Standardization
ISSFA	International Solid Surface Fabricators Association
ITS	Intertek
ITU	International Telecommunication Union
KCMA	Kitchen Cabinet Manufacturers Association
LMA	Laminating Materials Association (Now part of CPA)
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturers Association

REFERENCES
01 42 00 -7



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MFMA	Maple Flooring Manufacturers Association, Inc.
MFMA	Metal Framing Manufacturers Association
MH	Material Handling (Now MHIA)
MHIA	Material Handling Industry of America
MIA	Marble Institute of America
MPI	Master Painters Institute
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.
NAAMM	National Association of Architectural Metal Manufacturers
NACE	NACE International (National Association of Corrosion Engineers International)
NADCA	National Air Duct Cleaners Association
NAGWS	National Association for Girls and Women in Sport
NAIMA	North American Insulation Manufacturers Association
NBGQA	National Building Granite Quarries Association, Inc.
NCAA	National Collegiate Athletic Association (The)
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NCTA	National Cable & Telecommunications Association
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NeLMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NETA	InterNational Electrical Testing Association
NFHS	National Federation of State High School Associations
NFPA	NFPA (National Fire Protection Association)
NFRC	National Fenestration Rating Council

REFERENCES
01 42 00 -8



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NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NLGA	National Lumber Grades Authority
NIS	National Institute of Standards and Technology
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association)
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	NSF International (National Sanitation Foundation International)
NSSGA	National Stone, Sand & Gravel Association
NTMA	National Terrazzo & Mosaic Association, Inc. (The)
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)
NWWDA	National Wood Window and Door Association (Now WDMA)
OPL	Omega Point Laboratories, Inc. (Acquired by ITS - Intertek)
PCI	Precast / Pre-stressed Concrete Institute
PDCA	Painting & Decorating Contractors of America
PDI	Plumbing & Drainage Institute
PGI	PVC Geomembrane Institute
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America)
PPS	Power Piping Society
PTI	Post-Tensioning Institute
RCSC	Research Council on Structural Connections
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RMI	Rack Manufacturers Institute
RTI	(Formerly: NTRMA - National Tile Roofing Manufacturers Association) (Now TRI)



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SAE	SAE International
SCAQMD	South Coast Air Quality Management District
SCS	Scientific Certification System
SDI	Steel Deck Institute
SDI	Steel Door Institute
SEFA	Scientific Equipment and Furniture Association
SGCC	Safety Glazing Certification Council
SHBI	Steel Heating Boiler Institute
SIA	Security Industry Association
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SMPTE	Society of Motion Picture and Television Engineers
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division)
SPIB	Southern Pine Inspection Bureau (The)
SPRI	Single Ply Roofing Industry
SSINA	Specialty Steel Industry of North America
SSPC	SSPC: The Society for Protective Coatings
STI	Steel Tank Institute
SWI	Steel Window Institute
SWRI	Sealant, Waterproofing, & Restoration Institute
TCA	Tile Council of America, Inc.
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
TMS	The Masonry Society



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TPI	Truss Plate Institute, Inc.
TPI	Turfgrass Producers International
TRI	Tile Roofing Institute (Formerly: RTI - Roof Tile Institute)
UL	Underwriters Laboratories Inc.
ULC	Underwriters Laboratories of Canada
UNI	Uni-Bell PVC Pipe Association
USAV	USA Volleyball
USC	United States Code
USGBC	U.S. Green Building Council
USITT	United States Institute for Theatre Technology, Inc.
WASTEC	Waste Equipment Technology Association
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association (Now WCSC)
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association)
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association)
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California)
WIC	Woodwork Institute of California (Now WI)
WMMPA	Wood Moulding & Millwork Producers Association
WRI	Wire Reinforcement Institute, Inc.
USEPA	United States Environmental Protection Agency
WSRCA	Western States Roofing Contractors Association
WWPA	Western Wood Products Association

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 42 00

REFERENCES
01 42 00 -11



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No Text

REFERENCES
01 42 00 -12



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**SECTION 01 50 00
TEMPORARY FACILITIES, SERVICES AND CONTROLS**

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This section includes the following:
- a. Temporary Water System
 - b. Temporary Sanitary Facilities
 - c. Temporary Electric Power, Temporary Lighting System, And Site Security Lighting
 - d. Temporary Heat
 - e. Dewatering Facilities And Drains
 - f. Temporary Field Office for Contractor
 - g. Resident Engineer's Office
 - h. Material Sheds
 - i. Temporary Enclosures
 - j. Temporary Partitions
 - k. Temporary Fire Protection
 - l. Work Fence Enclosure
 - m. Rodent and Insect Control
 - n. Plant Pest Control Requirements
 - o. Project Identification Signage
 - p. Security Guards/Fire Guards on Site
 - q. Project Sign and Rendering
 - r. Safety

1.3 RELATED SECTIONS: include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 42 00 REFERENCES
- C. Section 01 54 11 TEMPORARY ELEVATORS AND HOISTS
- D. Section 01 54 23 TEMPORARY SCAFFOLDS AND SWING STAGING
- E. Section 01 77 00 CLOSE OUT PROCEDURES

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Permanent Enclosure: As determined by Commissioner, permanent or temporary roofing that is complete, insulated, and weather tight; exterior walls which are insulated and weather tight; and all openings that are closed with permanent construction or substantial temporary closures.



- C. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.5 SUBMITTALS:

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Reports: Submit reports of tests, inspections, meter readings and similar procedures for temporary use.

1.6 PROJECT CONDITIONS:

- A. Temporary Use of Permanent Facilities and Services: The Contractor shall be responsible for the operation, maintenance, and protection of each permanently installed facility and service while in use during construction before Final Acceptance by the City, regardless of previously assigned responsibilities.
- B. Install, operate, maintain and protect temporary facilities, services and controls.
1. Keep temporary services and facilities clean and neat in appearance.
 2. Operate temporary services in a safe and efficient manner.
 3. Relocate temporary services and facilities as needed as Work progresses.
 4. Do not overload temporary services and facilities or permit them to interfere with progress.
 5. Provide necessary fire prevention measures.
 6. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on-site

1.7 NON-REGULAR WORK HOURS (OVERTIME):

- A. The Contractor shall provide the temporary services, facilities and controls set forth in this Section during other than regular working hours if the Drawings and/or the Specifications indicate that the Work, or specific components thereof, must be performed during other than regular working hours. In such case, all costs for the provision of temporary services, facilities and controls during other than regular working hours shall be deemed included in the total Contract Price.
- B. The Contractor shall provide the temporary services, facilities and controls set forth in this Section during other than regular working hours if a change order is issued directing the Contractor to perform the Work, or specific components thereof, during other than regular working hours. In such case, compensation for the provision of temporary services, facilities and controls during other than regular working hours shall be provided through the change order.

1.8 SERVICES BEYOND COMPLETION DATE:

- A. The Contractor shall provide the temporary services, facilities and controls set forth in this Section until the date on which it completes all required work at the site, including all punch list work, as certified in writing by the Resident Engineer, or earlier if so directed in writing by the Commissioner. The Contractor shall provide such temporary services, facilities and controls even if completion of all required work at the site occurs after the time fixed for such completion in Schedule A.



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PART II – PRODUCTS

2.1 MATERIALS:

- A. Provide undamaged materials in serviceable condition and suitable for use intended.
- B. Tarpaulins: Waterproof, fire-resistant UL labeled with flame spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- C. Water: Potable and in compliance with requirements of the Department of Environmental Protection.

2.2 EQUIPMENT:

- A. Provide undamaged equipment in serviceable condition and suitable for use intended.
- B. Water Hoses: Heavy-duty abrasive-resistant flexible rubber hoses, 100 feet (30 m) long with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electric Power Cords: Grounded extension cords.
 - 1. Provide hard-service cords where exposed to abrasion or traffic.
 - 2. Provide waterproof connectors to connect separate lengths of electric cords where single lengths will not reach areas of construction activity.
 - 3. Do not exceed safe length-voltage ratio.
- D. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART III – EXECUTION:

3.1 INSTALLATION, GENERAL:

- A. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities as approved by the Resident Engineer.

3.2 TEMPORARY WATER SYSTEM:

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.2 A

- A. TEMPORARY WATER SYSTEM - NEW FACILITIES: During construction, the Contractor shall furnish a Temporary Water System as set forth below.
 - 1. Immediately after the Commissioner has issued an order to start work, the Contractor shall file an application with the Dept. of Environmental Protection for the schedule of charges for water use during construction. The Contractor will be responsible for payment of water charges.
 - 2. Immediately after the Commissioner has issued an order to start work, the Contractor shall file an application with the Department of Environmental Protection's Bureau of Water Supply and obtain a permit to install the temporary water supply system. The system shall be installed and maintained for the use of the Contractor and its subcontractors. A copy of the above mentioned permit shall be filed with the Commissioner. The Contractor shall provide temporary water main, risers and waste stacks as directed and install on each floor, outlets with two (2) 3/4" hose valve connections over a barrel installed on a steel pan. The Contractor shall provide drains from the pans to the stack and house sewer and hose bibs to drain the water supply

risers and mains. During winter months, the Contractor shall take the necessary precautions to prevent the temporary water system from freezing. The Contractor shall provide repairs to the temporary water supply system for the duration of the project until said temporary system is dismantled and removed.

3. Disposition of Temporary Water System: The Contractor shall be responsible for dismantling the temporary water system when no longer required for the construction operations, or when replaced by the permanent water system installed for the project, or as otherwise directed by the Resident Engineer. All repair work resulting from the dismantling of the temporary water system shall be the responsibility of the Contractor.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.2 B

- B. TEMPORARY WATER SYSTEM – PROJECTS IN EXISTING FACILITIES:
 1. When approved by the Commissioner, use of existing water system will be permitted for temporary water service during construction, as long as the system is cleaned and maintained in a condition acceptable to the Commissioner. At Substantial Completion, the Contractor shall restore the existing water system to conditions existing before initial use.
 2. The Contractor shall be responsible for all repairs to the existing water system permitted to be used for temporary water service during construction. The Contractor shall be responsible to maintain the existing system in a clean condition on a daily basis, acceptable to the Commissioner.
 3. The Contractor will be responsible for payment of water charges as directed by the Commissioner. Billing will be in accordance with the Department of Environmental Protection schedule of charges for Building Purposes.
- C. WASH FACILITIES: The Contractor shall install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition.
 1. Dispose of drainage properly.
 2. Supply cleaning compounds appropriate for each condition.
 3. Include safety showers, eyewash fountains and similar facilities for the convenience, safety and sanitation of personnel.
- D. DRINKING WATER FACILITIES: The Contractor shall provide drinking water fountains or containerized tap-dispenser bottled-drinking water units, complete with paper cup supplies. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 deg. F (7 to 13 deg. C).

3.3 TEMPORARY SANITARY FACILITIES:

- A. The Contractor shall provide toilets, wash facilities and drinking water fixtures in compliance with regulations and health codes for type, number, location, operation and maintenance of fixtures and facilities. Provide toilet tissue, paper towels, paper cups and similar disposable materials as appropriate for each facility, and provide covered waste containers for used materials.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.3 B

- B. SELF-CONTAINED TOILET UNITS:
 1. The Contractor shall provide temporary single-occupant toilet units of the chemical, aerated recirculation, or combustion type for use by all construction personnel. Units shall be properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material. Quantity of toilet units shall comply with the latest OSHA regulations.
 2. Toilets: Install separate self-contained toilet units for male and female personnel. Shield toilets to ensure privacy.



REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.3 C

C. EXISTING TOILETS:

1. **TOILET FACILITIES:** When approved by the Commissioner, the Contractor shall arrange for the use of existing toilet facilities by all personnel during the execution of the work. The Contractor shall be responsible to clean and maintain facilities in a condition acceptable to the Resident Engineer and, at completion of construction, to restore facilities to their condition at the time of initial use.
2. **MAINTENANCE** - The Contractor shall maintain the temporary toilet facilities in a clean and sanitary manner and make all necessary repairs.
3. **NUISANCES** - The Contractor shall not cause any sanitary nuisance to be committed by its employees or the employees of its subcontractors in or about the work, and shall enforce all sanitary regulations of the City and State Health Authorities.

3.4 TEMPORARY ELECTRIC POWER, TEMPORARY LIGHTING SYSTEM, AND SITE SECURITY LIGHTING:

- A. **SCOPE:** This Section sets forth the General Conditions and procedures relating to Temporary Electric Power, Temporary Lighting System and Site Security Lighting during the construction period.
- B. **TEMPORARY ELECTRIC POWER:**
The Contractor shall provide and maintain a Temporary Electric Power service and distribution system of sufficient size, capacity and power characteristics required for construction operations for all required work by the Contractor and its subcontractors, including but not limited to power for the Temporary Lighting System, Site Security Lighting, construction equipment, hoists, temporary elevators and all field offices. Temporary Electric Power shall be provided as follows:

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.4 B (1)

1. **CONNECTION TO UTILITY LINES:**
 - a. **Temporary Electric Power Service** for use during construction shall be provided as follows: The Contractor shall make all necessary arrangements with the Public Utility Company and pay all charges for the Temporary Electric Power system. The Contractor shall include in its total Contract Price any charges for Temporary Electric Power, including charges that may be made by the Public Utility Company for extending its electrical facilities, and for making final connections. The Contractor shall make payment directly to the Public Utility Company.
 - b. **APPLICATIONS FOR METER:** The Contractor shall make application to the Public Utility Company and sign all documents necessary for, and pay all charges incidental to, the installation of a watt hour meter or meters for Temporary Electric Power. The Contractor shall pay to the Public Utility Company, all bills for Temporary Electric energy used throughout the work, as they become due.
 - c. **SERVICE AND METERING EQUIPMENT** - The Contractor shall furnish and install, at a suitable location on the site, approved service and metering equipment for the Temporary Electric Power System, ready for the installation of the Public Utility Company's metering devices. The temporary service mains to and from the metering location shall be not less than 100 Amperes, 3-phase, 4-wire and shall be of sufficient capacity to take care of all demands for all construction operations and shall meet all requirements of the NYCEC.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.4 B (2)

2. CONNECTION TO EXISTING ELECTRICAL POWER SERVICE:
- a. When approved by the Commissioner, electrical power service for the Temporary Lighting System and for the operation of small tools and equipment less than 1/4 horsepower may be taken from the existing electric distribution system if the existing system is of adequate capacity for the temporary power load. The Contractor shall cooperate and coordinate with the facility custodian, so as not to interfere with the normal operation of the facility.
 - b. There will be no charge to the Contractor for the electrical energy consumed.
 - c. The Contractor shall provide, maintain and pay all costs for separate temporary electric power for any temporary power for equipment larger than 1/4 horsepower. When directed by the Commissioner, the Contractor shall remove its own temporary power system.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.4 B (3)

3. ELECTRICAL GENERATOR POWER SERVICE:
- a. When connection to Utility Lines or existing facility electric service is not available or is not adequate to supply the electric power need for construction operations, the Contractor shall provide self-contained generators to provide power beyond that available.
 - b. Pay for all energy consumed in the progress of the Work, exclusive of that available from the existing facility or Utility Company.
 - c. Provide for control of noise from the generators.
 - d. Comply with the Ultra Low Sulfur Fuel in Non-Road Vehicles requirements as set forth in Article 5.4 of the Contract.
- C. USE OF COMPLETED PORTIONS OF THE ELECTRICAL WORK:
1. USE OF MAIN DISTRIBUTION PANEL: As soon as the permanent electric service feeders and equipment, metering equipment and main distribution panel are installed and ready for operation, the Contractor shall have the temporary lighting and power system changed over from the temporary service points to the main distribution panel.
 2. COST OF CHANGE OVER - The Contractor shall be responsible for all costs due to this change over of service and it shall also make application to the Public Utility Company for a watt hour meter to be set on the permanent meter equipment.
 3. The requirements for temporary electric power service specified herein shall be adhered to after change over of service until final acceptance of the project.
 4. NO EXTRA COST - The operation of the service and switchboard equipment shall be under the supervision of the Contractor, but this shall in no way be interpreted to mean the acceptance of such part of the installation or relieve the Contractor from its responsibility for the complete work or any part thereof. There shall be no additional charge for supervision by the Contractor.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.4 D

- D. TEMPORARY LIGHTING SYSTEM:
1. The Contractor shall provide adequate service for the temporary lighting system, or a minimum of 100 Amperes, 3-phase, 4-wire service for the temporary lighting system, whichever is



- greater, and make all necessary arrangements with the Public Utility Company and pay all charges by them for the Temporary Lighting System
2. The Contractor shall furnish and connect to the metered service point, a Temporary Lighting System to illuminate the entire area where work is being performed and points adjacent to the work, with separately fused circuits for stairways and bridges. Control switches for stairway circuits shall be located near entrance on ground floor.
 3. ITEMS: The Temporary Lighting System provided by the Contractor shall consist of wiring, fixtures, left-hand double sockets, (one (1) double socket for every 400 square feet, with one (1) lamp and one (1) three-prong outlet) lamps, fuses, locked type guards, pigtails and any other incidental material. Additional details may be outlined in the detailed Specifications for the Electrical Work. Changes may be made, provided the full equivalent of those requirements is maintained.
 4. The Temporary Lighting System shall be progressively installed as required for the advancement of the work under the Contract.
 5. RELOCATION: The cost for the relocation or extension of the original Temporary Lighting System, required by the Contractor or its subcontractors, that is not required due to the normal advancement of the work, as determined by the Resident Engineer, shall be borne by the Contractor.
 6. PIGTAILS: shall be furnished with left-hand sockets with locked type guards and 40 feet of rubber covered cable. The Contractor shall furnish and distribute a minimum of three (3) complete pigtails to each subcontractor. See the detailed Electrical Specifications for possible additional pigtails required.
 7. LAMPS: The Contractor shall furnish and install one (1) complete set of lamps, including those for the trailers. Broken and burned out lamps in the temporary lighting system, DDC field office and construction trailers, shall be replaced by the Contractor. All lamps shall be compact fluorescent
 8. CIRCUIT PROTECTION: The Contractor shall furnish and install GFI protection for the Temporary Lighting and Site Security Lighting Systems.
 9. MAINTENANCE OF TEMPORARY LIGHTING SYSTEM:
 - a. The Contractor shall maintain the Temporary Lighting System in good working order during the scheduled hours established.
 - b. The Contractor shall include in its total Contract Price all costs in connection with the Temporary Lighting System, including all costs for installation, maintenance and electric power.
 10. REMOVAL OF TEMPORARY LIGHTING SYSTEM: The temporary lighting system shall be removed by the Contractor when authorized by the Commissioner.
 11. HAND TOOLS: The temporary lighting system shall not be used for power purposes, except that light hand tools not larger than 1/4 horsepower may be operated from such system by the Contractor and its subcontractors.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.4 E

- E. SITE SECURITY LIGHTING (FOR NEW CONSTRUCTION ONLY):
1. The Contractor shall furnish, install and maintain a system of site security lighting, as herein specified, to illuminate the construction site of the project, and it shall be connected to and energized from the Temporary Lighting System. All costs in connection with site security lighting shall be deemed included in the total Contract Price.
 2. It is essential that the site security lighting system be completely installed and operating, at the earliest possible date. The Contractor shall direct its subcontractors to cooperate, coordinate and exert every effort to accomplish an early complete installation of the site security lighting system. After the system is installed and in operation, if a part of the system interferes with the work of any trade, the Contractor shall be completely responsible for the expense of removing,



- relocating and replacing all equipment necessary to reinstate the system to proper operating conditions.
3. The system shall consist of flood lighting by pole mounted guarded sealed-beam units. Floodlight units shall be mounted 16 feet above grade. Floodlights shall be spaced around the perimeter of the site to produce an illumination level of no less than one (1) foot candle around the perimeter of the site, as well as in any potentially hazardous area or any other area within the site that might be deemed by the Resident Engineer to require security illumination. The system shall be installed in a manner acceptable to the Resident Engineer. The first lighting unit in each circuit shall be provided with a photoelectric cell for automatic control. The photoelectric cell shall be installed as per manufacturer's recommendations.
 4. All necessary poles shall be furnished and installed by the Contractor.
 5. The site security lighting shall be kept illuminated at all times during the hours of darkness. The Contractor shall, at its own expense, shall keep the system in operation, and shall furnish and install all material necessary to replace all damaged or burned out parts.
 6. The Contractor shall be on telephone call alert for maintaining the system during the operating period stated above.
 7. All materials and equipment furnished under this section shall remain the property of the Contractor and shall be removed and disposed of by the Contractor when authorized in writing by the Resident Engineer.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.5

3.5 TEMPORARY HEAT:

A. GENERAL:

1. Definition: The provision of Temporary Heat shall mean the provision of heat in order to permit construction to be performed in accordance with the Progress Schedule during all seasons of the year and to protect the work from the harmful effects of low temperature. In the event the building, or any portion thereof, is occupied during construction, the provision of Temporary Heat shall include the provision of heat to permit normal operations in such occupied areas.
 - a. The provision of Temporary Heat shall be in accordance with the temperature requirements set forth in Sub-Section 3.5 C herein.
 - b. The provision of Temporary Heat shall include the provision of: 1) all fuel necessary and required, 2) all equipment necessary and required, and 3) all operating labor necessary and required. Operating labor shall mean that minimum force required for the safe day to day operation of the system for the provision of Temporary Heat and shall include, without limitation, heating maintenance labor and/or Fire Watch as required by NYC Fire Department regulations. Operating labor may be required seven (7) days per week and during other than normal working hours, for the period of time required by seasonal weather conditions.
 - c. In the event the building, or any portion thereof, is occupied and the Project involves the replacement, modification and/or shut down of the permanent heating system, or any key component thereof; and such system is a combined system which furnishes domestic hot water for the building occupants, the provision of Temporary Heat shall include the provision of domestic hot water at the same temperature as the system which is being replaced. Domestic hot water shall be provided in accordance with the phasing requirements set forth in the Contract Documents.
2. Responsibility: The Contractor's responsibility for the provision of Temporary Heat, including all expenses in connection therewith, shall be as set forth below:
 - a. Projects Involving Enclosure of the Building:



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- 1) Prior to Enclosure - Until the Commissioner determines that the building has been enclosed, as set forth in Sub-Section 3.5 B; the Contractor shall be responsible for the provision of Temporary Heat.
 - 2) Post Enclosure - Once the Commissioner determines that the building, or any portion thereof, has been enclosed, as set forth in Sub-Section 3.5 B, the Contractor shall be responsible for the provision of Temporary Heat by one or more of the following means: 1) by an existing heating system (if any), 2) by a permanent heating system which is being installed as part of the Project, or 3) by a temporary heating system(s).
 - 3) The Contractor shall, within two (2) weeks of the kick-off meeting, submit to DDC for review its proposed plan to provide Temporary Heat. Such plan is subject to approval by the Resident Engineer. The Contractor shall provide Temporary Heat in accordance with the approved plan until written acceptance by the Commissioner of the work of all Contractors, including punch list work, unless directed otherwise in writing by the Commissioner. The responsibility of the Contractor provided for herein is subject to the exception set forth in Sub-Section 3.5 A.2 (b) herein.
- b. Projects not involving Enclosure of the Building:
- 1) If the Project involves the installation of a new permanent heating system if one did not exist previously, or the replacement, modification and/or shut down of the existing permanent heating system, or any key component thereof, the Contractor shall be responsible for the provision of Temporary Heat, except as otherwise provided in Sub-Section 3.5 H.3(b).2 herein.
 - 2) If the Project does not involve the installation of a new permanent heating system if one did not exist previously, or the replacement, modification and/or shut down of the existing permanent heating system, or any key component thereof; there is no Contractor responsibility of the provision of Temporary Heat, unless otherwise specified in the Contract Documents. However, if the Commissioner, pursuant to Sub-Section 3.5 H.3 (b).1 herein, determines that the provision of Temporary Heat is necessary due to special and/or unforeseen circumstances, the Contractor shall be responsible for the provision of Temporary Heat and shall be paid for the same in accordance with Sub-Section 3.5 H.3 (b).1 herein.
- B. ENCLOSURE OF STRUCTURES:
1. Notification: The Contractor shall notify all its subcontractors and the Resident Engineer at least 30 days prior to the anticipated date that the building(s) will be enclosed.
 2. Commissioner Determination: The Commissioner shall determine whether the building, or any portion thereof, has been enclosed. As indicated in Sub-Section 3.5 A.2 above, once the building has been enclosed, the Contractor shall be responsible for the provision of Temporary Heat. The Commissioner's determination with respect to building enclosure shall be based upon all relevant facts and circumstances, including without limitation, 1) whether the building meets the criteria set forth in Paragraph 3 below, and 2) whether the openings in the building, such as doorways and windows, have been sufficiently covered so as to provide reasonable heat retention and protection from the elements
 3. Criteria for enclosure:
 - a. Roof Area:
 - 1) A building shall be considered to be roofed when the area to be roofed is covered by a permanent structure and all openings through the permanent structure are covered and protected by temporary covers as described in Paragraph (c) below.
 - 2) Intermediate floor structures of multi-floor buildings shall be considered to be roofed subject to the same requirements of the building roof.



- 3) The final roofing system need not be in place for the building or structure to be determined to be enclosed; provided, however, all openings through the permanent structure covering the roof must be covered and protected by temporary covers, as described in Paragraph (c) below.
 - b. Walls: For the walls to be determined to be enclosed permanent exterior wall elements or facing material must be in place and all openings must be covered and protected by temporary covers, as described in Paragraph (c) below.
 - c. Temporary Covers: In order to be acceptable, temporary covers must be securely fixed to prevent the entrance of rain, snow and direct wind. The minimum material requirements for temporary covers are as follows: 1) minimum 10 mil. Plastic 2) minimum 12 ounce waterproof canvas tarpaulins, or 3) a minimum three-eighths (3/8) inch thickness exterior grade plywood.
 - d. Temporary covers for openings shall be the responsibility of the Contractor and such work shall be deemed included in the Contract price.

C. TEMPERATURE REQUIREMENTS:

- 1. Unoccupied Buildings: The temperature requirement for the provision of Temporary Heat in unoccupied buildings shall be the GREATER of the following: 1) 50 degrees Fahrenheit, or 2) the temperature requirement for the particular type of work set forth in the Contract Documents.
- 2. Occupied Buildings: The temperature requirement for the provision of Temporary Heat in occupied buildings, or portions thereof, shall be the GREATER of the following: 68 degrees Fahrenheit or the temperature requirement for the particular type of work set forth in the Contract Documents.

D. DURATION:

- 1. The Contractor shall be required to provide Temporary Heat until the date on which it completes all required work at the site, including all punch list work, as certified in writing by the Resident Engineer, or earlier if so directed in writing by the Commissioner. The Contractor shall be responsible for the provision of Temporary Heat for the time specified herein, regardless of any delays in completion of the Project, including delays that result in the commencement of the provision of Temporary Heat during a season that is later than that which may have been originally anticipated. The Contractor shall include in its Total Contract Price all expenses in connection with the provision of Temporary Heat in accordance with the requirements specified herein.
- 2. The total Contract duration is set forth in consecutive calendar days in Schedule A of the Addendum. The Table set forth below indicates the number of full heating seasons that are deemed included in various contract durations, which are specified in consecutive calendar days (ccds). At a minimum, a full heating season shall extend from October 15th to April 15th.

Contract Duration	Full Heating Seasons Required
up to 360 ccds	1 full heating season
360 to 720 ccds	2 full heating seasons
more than 720 ccds	3 full heating seasons

E. METHOD OF TEMPORARY HEAT:

- 1. The method of temporary heat shall be in conformance with the New York City Fire Code and with all applicable laws, rules and regulations. Prior to implementation, such method shall be subject to the written approval of the Commissioner.
- 2. The method of temporary heat shall:
 - a. Not cause the deposition of dirt or smudges upon any finished work or cause any defacement or discoloration to the finished work.
 - b. Not be injurious or harmful to people or materials.



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- c. Portable fueled heating devices or equipment SHALL NOT BE ALLOWED for use as temporary heat other than construction-related curing or drying in conformance with the NYC Fire Code.
 3. No open fires will be permitted.
- F. TEMPORARY HEATING SYSTEM:
1. The temporary system for the provision of Temporary Heat provided by the Contractor following enclosure of the building shall be complete including, subject to provisions of paragraph E above, boilers pumps, radiators, space heaters, water and heating piping, insulation and controls. The temporary system for the provision of Temporary Heat shall be capable of maintaining the minimum temperature requirements set forth in Paragraph C above.
- G. COORDINATION:
1. The Contractor, in the provision of Temporary Heat, shall coordinate its operations in order to insure sufficient and timely performance of all required work, including work performed by trade subcontractors. The Contractor shall supply and pay for all water required and used in the building for the operation of the heating system(s) for the purpose of Temporary Heat. The Contractor shall include all expenses in connection with the supply of water for Temporary Heat in its Total Contract Price. During the period in which Temporary Heat in an enclosed building is being furnished and maintained, the Contractor shall provide proper ventilating and drying, open and close the windows and other openings when necessary for the proper execution of the work and also when directed by DDC. The Contractor shall maintain all permanent or temporary enclosures at its own expense.
- H. USE OF PERMANENT HEATING SYSTEMS:
1. Use of Permanent Heating System for Temporary Heat after Building Enclosure
 - a. The Contractor shall provide all labor and materials to promptly furnish and set all required equipment and convectors and/or radiators, piping, valves, fitting, etc., in ample time for their use for the provision of Temporary Heat after enclosure of the building.
 - b. New portions of the permanent heating system that are used for furnishing Temporary Heat shall be left in near perfect condition when delivered to the City for operation. Any repairs required, other than for ordinary wear and tear on the equipment, shall be made by the Contractor at his/her expense. The starting date for the warranty or guarantee period for such equipment shall be the date of Substantial Completion acceptance.
 - c. In the event that the Contractor does not advance the installation of the permanent heating system in sufficient time to permit its use for Temporary Heat as determined by DDC, the Contractor shall furnish and install a separate system for the provision of Temporary Heat as required to maintain the minimum temperature requirements set forth in Paragraph C above.
 2. All equipment for the system for the provision of Temporary Heat shall be placed so as to comply with the requirements specified hereinbefore, and shall be connected, disconnected and suitably supported and located so as to permit construction work, including finish work such as wall plastering and painting, to proceed. The installation of the system for the provision of Temporary Heat by the Contractor, including the placing of ancillary system equipment, shall be coordinated with the operations of all trade subcontractors so as to insure sufficient and timely performance of the work. Once the permanent heating system is operating properly, the Contractor shall remove all portions of the system for Temporary Heat not part of the permanent heating system.
 3. Temporary Heat Allowance for Special Conditions or and/or Unforeseen Circumstances.
 - a. The City may establish an allowance in the Contract for payment of costs and expenses in connection with the provision of Temporary Heat as set forth herein. If established, the City will include an amount for such allowance on the Bid Form, and the Contractor shall



- include such allowance amount in its Total Contract Price. The Contractor shall only be entitled to payment from this allowance under the conditions and in accordance with the requirements set forth below. In the event this allowance or any portion thereof remains unexpended at the conclusion of the Contract, such allowance shall remain the sole property of the City. Should the amount of the allowance be insufficient to provide payment for the expenses specified below, the City will increase the amount of the allowance.
- b. The allowance set forth herein may be utilized only under the conditions set forth below.
 1. In the event the Project does not involve the installation of a new permanent heating system if one did not exist previously, or the replacement, modification and/or shut down of the existing permanent heating system, or any key component thereof, and the Commissioner determines that the provision of Temporary Heat is necessary due to special and/or unforeseen circumstances, the Contractor shall be responsible for the provision of Temporary Heat, as directed by the Commissioner. The City shall pay such Contractor for all costs for labor, material, and equipment necessary and required for the same. Payment shall be made in accordance with Article 26 of the Contract, except that the cost of fuel shall be as set forth in Paragraph (c) below.
 2. In the event the Commissioner determines that there is a need for maintenance of the permanent heating system by the Contractor after written acceptance by the Commissioner of the work, and that the need for such maintenance is not the fault of the Contractor, the Contractor shall provide the required maintenance of the permanent heating system for the period of time directed by the Commissioner. The City shall pay the Contractor for the cost of direct labor and fuel necessary and required in connection with such maintenance, excluding the cost of any foremen or other supervision. Payment shall be made in accordance with Article 26 of the Contract, except that the cost of fuel shall be as set forth in Paragraph (c) below.
 - c. Payment for Fuel Costs - Payment from the allowance set forth herein for the cost of fuel necessary and required to operate the system for the provision of Temporary Heat or to maintain the permanent heating system under the conditions set forth in Paragraph b above shall be limited to the direct cost of such fuel. The Contractor shall not be entitled to any overhead and/or profit for such fuel costs. In order to receive payment for such fuel costs, the Contractor must present original invoices for the same. DDC reserves the right to furnish the required fuel.
- I. RELATED ELECTRICAL WORK:
1. The Contractor shall be responsible for providing the items set forth below and shall include all expenses in connection with such items in its Total Contract Price. The Contractor shall provide such items promptly when required and shall in all respects coordinate its work with the work performed by trade subcontractors in order to facilitate the provision of Temporary Heat.
 - a. The Contractor shall provide all labor, materials, equipment and power necessary and required to furnish and maintain any temporary or permanent electrical connections to all equipment specified to be connected as part of the work of his Contract.
 - b. The Contractor shall supply and pay for all power necessary and required for the operation of the system for the provision of Temporary Heat and/or the permanent heating system used for Temporary Heat. Such power shall be provided by the Contractor for the duration the Contractor is required to provide Temporary Heat, as set forth in Sub-Section 3.5 D herein.
 2. In providing the items set forth in Paragraph 1 above, the Contractor is advised that labor may be required seven (7) days a week and/or during other than normal working hours for the period of time required by seasonal weather conditions.



J. RELATED PLUMBING WORK:

1. The Contractor shall be responsible for providing all labor, materials and equipment necessary and required to furnish and maintain all temporary or permanent connections to all equipment or plumbing outlets specified to be provided as part of the work of this Contract. The Contractor shall include all expenses in connection with such items of work in its Total Contract Price. The Contractor shall provide such items of work promptly when required and shall in all respects coordinate its work with the work performed by trade subcontractors in order to facilitate the provision of Temporary Heat.
2. In the event portions of the permanent plumbing equipment furnished by the Contractor as part of the work of this Contract are used for the provision of Temporary Heat either during construction or prior to acceptance by the City of the complete plumbing system, the Contractor shall be responsible to provide such plumbing equipment to the City in near perfect condition and shall make any repairs required, other than for ordinary wear and tear on the equipment, at his expense. The starting date for warranty and/or guarantee period for such plumbing equipment shall be the date of Substantial Completion acceptance by the City.
3. For Projects requiring the installation of new and/or modified gas service, as well as associated meter installations, the Contractor shall promptly perform all required filings and coordination with the Utility Companies in order to expedite the installation, testing, and approval of the gas service and associated meter(s).

3.6 STORM WATER CONTROL, DEWATERING FACILITIES AND DRAINS:

A. PUMPING:

1. Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of storm water from heavy rainfall.
2. Contractor shall furnish and install all necessary automatically operated pumps of adequate capacity with all required piping to run-off agencies, so as to maintain the excavation, cellar floor, pits and exterior depressions and excavations free from accumulated water during the entire period of construction and up to the date of final acceptance of work of the Contract.
3. All pumps shall be maintained at all times in proper working order.
4. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
5. Remove snow and ice as required to minimize accumulations.

3.7 TEMPORARY FIELD OFFICE FOR CONTRACTOR:

- A. The Contractor shall establish a temporary field office for its own use at the site during the period of construction, at which readily accessible copies of all Contract Documents shall be kept.
- B. The field office shall be located where it will not interfere with the progress of any part of the work or with visibility of traffic control devices.
- C. **CONTRACTOR'S REPRESENTATIVE:** In charge of the office there shall be a responsible and competent representative of the Contractor, duly authorized to receive orders and directions and to put them into effect.
- D. Arrangements shall be made by the Contractor whereby its representative may be readily accessible by telephone.
- E. All temporary structures shall be of substantial construction and neat appearance, and shall be painted a uniform gray unless otherwise directed by the Commissioner.
- F. **CONTRACTOR'S SIGN -** The Contractor shall post and keep posted, on the outside of its field office, office or exterior fence or wall at site of work, a legible sign giving full name of the company, address of the company and telephone number(s) of responsible representative(s) of the firm who can be reached in event of an emergency at any time.

- G. ADVERTISING PRIVILEGES - The City reserves the right to all advertising privileges. The Contractor shall not cause any signs of any kind to be displayed at the site unless specifically required herein or authorized by the Commissioner.

3.8 DDC FIELD OFFICE:

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.8 A

- A. OFFICE SPACE IN EXISTING BUILDING:
1. The Resident Engineer will arrange for office space for sole use in the building where work is in progress. The Contractor shall provide and install a lockset for the door to secure the equipment in the room. The Contractor shall provide two (2) keys to the Resident Engineer. After completion of the project the Contractor shall replace the original lockset on the door and ensure its proper operation.
 2. In addition to equipment specified in Sub-Section 3.8 D, the Contractor shall provide, for exclusive use of the DDC Field Office, the following:
 - a. Two (2) single pedestal desks, 42" x 32"; two (2) swivel chairs with arms and three (3) side chairs without arms to match desk. Two metal (2) lockers, single units, 15" x 18" x 78" overall including 6" legs. Lockers to have flat key locks with two (2) keys each, General Steel products or approved equal. Two (2) full ball bearing suspension four (4) drawer vertical legal filing cabinets with locks, approximately 52"H x 28 1/2"D x 18"W.
 - b. One (1) 9000 B.T.U air conditioner or as directed by Commissioner. Wiring for the air conditioner shall be minimum No. 12 AWG fed from individual circuits in the fuse box.
 - c. One (1) folding conference table, 96" x 30" and ten (10) folding chairs.
 - d. Two (2) metal wastebaskets.
 - e. One (1) fire extinguisher, one (1) quart vaporizing liquid type, brass, wall mounted by Pyrene No. C21 or approved equal.
 - f. One (1) Crystal Springs water cooler with bottled water, Model No. LP14058 or approved equal to be furnished for the duration of the project as required.
 3. The Contractor shall provide one (1) telephone, where directed and shall pay all costs for telephone service for calls within the New York City limits for the duration of the project.
 4. All furniture and equipment, except computer equipment specified in Sub-Section 3.8 D.3, shall remain the property of the Contractor.
 5. Computer Workstation quantities shall be provided as specified in Sub-Section 3.8 B 3-a for DDC Managed Projects, or Sub-Section 3.8 B 3-b for CM Managed projects.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.8 B

- B. DDC FIELD OFFICE TRAILER:
1. GENERAL: The Contractor shall, for the time frame specified herein, provide and maintain at its own cost and expense a DDC Construction Field Office and all related items as specified herein [hereinafter collectively referred to as the "DDC Field Office"] for the exclusive use of the Resident Engineer. The DDC Field Office shall be located at the Project site and shall be solely dedicated to the Project. Provision of the DDC Field Office shall commence within THIRTY (30) days from Notice to proceed and shall continue through forty-five (45) days after Substantial Completion of the required construction at the Project site. The Contractor shall remove the DDC Field Office forty-five (45) days after Substantial Completion of the required construction, or as otherwise directed in writing by the Commissioner.
 2. TRAILER: The Contractor shall provide at its own cost and expense a mobile office trailer for use as the DDC Field Office. The Contractor shall install and connect all utility services to the



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trailer within thirty (30) days from Notice to Proceed. The trailer shall have equipment in compliance with the minimum requirements hereinafter specified. Any permits and fees required for the installation and use of said trailer shall be borne by the Contractor. The trailer including furniture and equipment therein, except computer equipment specified in Sub-Section 3.8D.3 herein, shall remain the property of the Contractor.

3. Trailer shall be an office type trailer of the size specified herein, with exterior stairs at entrance. Trailer construction shall be minimum 2 x 4 wall construction fully insulated with paneled interior walls, pre-finished gypsum board ceilings and vinyl tile floors.

**REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.8.B.3a or
SUB-SECTION 3.8.B.3b.**

- a. DDC Managed Project Trailer: DDC Field Office Trailer Size, Layout and Computer Workstation:
 - 1) Overall length: 32 Feet
Overall width: 10 Feet
 - 2) Interior Layout:
Provide one (1) general office/conference room area and one (1) private office at one end of the trailer. Provide equipment and amenities as specified in Sub-Section 3.8.B herein.
 - 3) Computer Workstation: Provide one (1) complete computer workstation, as specified in Sub-Section 3.8.D herein, in the private office area as directed by the Resident Engineer.

- b. CM Managed Project Trailer: DDC Field Office Trailer Size, Layout and Computer Workstation:
 - 1) Overall length: 50 Feet
Overall width: 10 Feet
 - 2) Interior Layout:
Provide one (1) large general office/conference room in the center of the trailer and two (2) private offices, one (1) each at either end of the trailer. Provide equipment and amenities as specified in Sub-Section 3.8.B herein.
 - 3) Computer Workstation:
Provide three (3) complete computer workstations as specified in Sub-Section 3.8.D herein. Provide one (1) each complete computer workstation in each private office and one (1) complete computer workstation at the secretarial position as directed by the Resident Engineer.

4. The exterior of the trailer shall be lettered with black block lettering of the following heights with white borders:

CITY OF NEW YORK	2-1/2"
DEPARTMENT OF DESIGN AND CONSTRUCTION	3-3/4"
DIVISION OF PUBLIC BUILDINGS	3-1/2"
DDC FEILD OFFICE	2-1/2"

NOTE: In lieu of painting letters on trailer the Contractor may substitute a sign constructed of a good quality weatherproof material with the same type and size of lettering above.
5. All windows and doors shall have aluminum insect screens. Provide wire mesh protective guards at all windows.
6. The interior shall be divided by partitions into general and private office areas as specified herein. Provide a washroom located adjacent to the private office and a built-in wardrobe closet opposite the washroom. Provide a built-in desk in the private office(s) with fixed overhead shelf and clearance below for two (2) file cabinets.



7. Provide a built-in drafting or reference table, located in the general office/conference room, at least 60 inches long by 36 inches wide with cabinet below and wall type plan rack at least 42 inches wide.
8. The washroom shall be equipped with a flush toilet, wash basin with two (2) faucets, medicine cabinet, complete with supplies and a toilet roll tissue holder. Plumbing and fixtures shall be approved house type, with each appliance trapped and vented and a single discharge connection. Five (5) gallon capacity automatic electric heater for domestic hot water shall be furnished.
9. HVAC: The trailer shall be equipped with central heating and cooling adequate to maintain a temperature of 72 degrees during the heating season and 75 degrees during the cooling season when the outside temperature is 5 degrees F. winter and 89 degrees F. summer.
10. Lighting shall be provided via ceiling mounted fluorescent lighting fixtures to a minimum level of 50 foot candles in the open and private office(s) along with sufficient lighting in the washroom. Broken and burned out lamps shall be replaced by the Contractor. A minimum of four (4) duplex convenience outlets shall be provided in the open office and two (2) each in the private office(s). These outlets shall be in addition to special outlet requirements for computer stations, copiers, HVAC unit, etc.
11. Electrical service switch and panel shall be adequately sized for the entire trailer load. Provide dedicated circuits for HVAC units, hot water heater, copiers and other equipment as required. All wiring and installation shall conform to the New York City Electrical Code.
12. The following movable equipment shall be furnished:
 - a. Two (2) single pedestal desks, 42" x 32"; two (2) swivel chairs with arms and three (3) side chairs without arms to match desk. Two (2) full ball bearing suspension four (4) drawer vertical legal filing cabinets with locks and two (2) full ball bearing two (2) drawer vertical legal filing cabinets in each private office located below built-in desk.
 - b. One (1) folding conference table, 96" x 30" and ten (10) folding chairs.
 - c. Three (3) metal wastebaskets.
 - d. One (1) fire extinguisher one (1) quart vaporizing liquid type, brass, wall mounted by Pyrene No. C21 or approved equal.
 - e. One (1) Crystal Springs water cooler with bottled water, Model No. LP14058 or approved equal to be furnished for the duration of the Contract as required.
13. TRAILER TEMPORARY SERVICE: Plumbing and electrical work required for the trailer will be furnished and maintained as below.
 - a. PLUMBING WORK: The Contractor shall provide temporary water and drainage service connections to the DDC Field Office trailer for a complete installation. Provide all necessary soil, waste, vent and drainage piping.

Contractor to frost-proof all water pipes to prevent freezing.

 - 1) REPAIRS, MAINTENANCE: The Contractor shall provide repairs for the duration of the project until the trailer is removed from the site.
 - 2) DISPOSITION OF PLUMBING WORK: At the expiration of the time limit set forth in Article 3.8 A.14(c).4 herein, the temporary water and drainage connections and piping to the DDC Field Office trailer shall be removed by the Contractor and shall be plugged at the mains. All piping shall become the property of the Contractor for Plumbing Work and shall be removed from the site, all as directed. All repair work due to these removals shall be the responsibility of the Contractor.
 - b. ELECTRICAL WORK:
 - 1) The Contractor shall furnish, install and maintain a temporary electric feeder to the DDC Field Office trailer immediately after it is placed at the job site.
 - 2) The temporary electrical feeder and service switch/fuse shall be adequately sized based on the trailer load and installed per the New York City Electrical Code and complying with utility requirements.



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- 3) Make all arrangements and pay all costs to provide electric service.
 - 4) The Contractor shall pay all costs for current consumed and for maintenance of the system in operating condition, including the furnishing of the necessary bulb replacements lamps, etc., for the duration of the project and for a period of forty-five (45) days after the date of Substantial Completion.
 - 5) Disposition of Electric Work: At the expiration of the time limit set forth, the temporary feeder, safety switch, etc., shall be removed and disposed of as directed.
 - 6) All repair work due to these removals shall be the responsibility of the Contractor.
- c. MAINTENANCE
- 1) The Contractor shall provide and pay all costs for regular weekly janitor service and furnish toilet paper, sanitary seat covers, cloth towels and soap and maintain the DDC Field Office in first-class condition, including all repairs, until the trailer is removed from the site.
 - 2) Supplies: The Contractor shall be responsible for providing (a) all office supplies, including without limitation, pens, pencils, stationery, filtered drinking water and sanitary supplies, and (b) all supplies in connection with required computers and printers, including without limitation, an adequate supply of blank CD's/DVD's, storage boxes for blank CDs/DVDs, and paper and toner cartridges for the printer.
 - 3) Risk of Loss: The entire risk of loss with respect to the DDC Field Office and equipment shall remain solely and completely with the Contractor. The Contractor shall be responsible for the cost of any insurance coverage determined by the Contractor to be necessary for the Field Office.
 - 4) At forty-five (45) days after the date of Substantial Completion, or sooner as directed by the Commissioner, the Contractors shall have all services disconnected and capped to the satisfaction of the Commissioner. All repair work due to these removals shall be the responsibility of the Contractor.
- d. TELEPHONE SERVICE: The Contractor shall provide and pay all costs for the following telephone services for the DDC Field Office trailer:
- 1) Separate telephone lines for one (1) desk phone in each private office.
 - 2) One (1) wall phone (with six (6) foot extension cord) at plan table.
 - 3) Separate telephone lines for the fax machine and internet access in each private office. Telephone service shall include voice mail.
 - 4) A remote bell located on outside of trailer
 - 5) The telephone service shall continue until the trailer is removed from the site.
- e. PERMITS: The Contractor shall make the necessary arrangements and obtain all permits and pay all fees required for this work.

- C. RENTED SPACE: The Contractor has the option of providing, at its cost and expense, rented office or store space in lieu of trailer. Said space shall be in the immediate area of the Project and have adequate plumbing, heating and electrical facilities. Space chosen by the Contractor for the DDC Field Office must be approved by the Commissioner before the area is rented. All insurance, maintenance and equipment, including computer workstations specified in Sub-Section 3.8 D in quantities required as specified in Sub-Section 3.8 B 3 for the DDC Field Office trailer, shall also apply to rented spaces.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.8 D

- D. ADDITIONAL EQUIPMENT FOR THE DDC FIELD OFFICE:
1. The Contractor shall provide a high volume copy machine (50 copies per minute) for paper sizes 8½ x 11, 8½ x 14 & 11 x 17. Copier shall remain at job site until the DDC Field office trailer is removed from the site.



2. The Contractor shall furnish a fax machine and a telephone answering machine at commencement of the project for the exclusive use of the DDC Field Office. All materials shall be new, sealed in manufacturer's original packaging and shall have manufacturers' warranties. All items shall remain the property of the City of New York at the completion of the project.
3. COMPUTER WORKSTATION: The Contractor shall provide a complete computer workstation as specified herein:
 - a. Hardware/Software Specification:
 - 1) Computer Equipment - Computers shall be provided for all contracts that have a Total Consecutive Calendar Days for construction duration as set forth in Schedule "A" of 180 CCD's or greater. Contracts of lesser duration shall not require computers.
 - 2) Computers furnished by the Contractor for use by City Personnel, for the duration of the contract, shall be in accordance with Specific Requirements, contained herein, shall remain the property of the City of New York at the completion of the project and shall meet the following minimum requirements:
 - 3) Personal Computer(s) – Each Workstation Configuration.
 - a) Make and Model: Dell; HP; Gateway; Acer; or, an approved equivalent. (Note: an approved equivalent requires written approval of the Assistant Commissioner of ITS.)
 - b) Processor: i5-2400 (6MB Cache, 3.1GHz) or faster computer - Single Processor.
 - c) System RAM: Minimum of 4GB (Gigabytes) Dual Channel DDR3 SDRAM at 1333MHz – 2 DIMMSs
 - d) Hard Disk Drive(s): 500 GB (Gigabytes) Serial ATA (7200RPM) w/DataBurst Cache, or larger.
 - e) CD-RW: Internal CD-RW, 48x Speed or faster.
 - f) 16xDVD+/-RW: DVD Burner (with double layer write capability) 16x Speed or faster
 - g) I/O Ports: Must have at least one (1) Serial Port, one (1) Parallel Port, and three (3) USB Ports.
 - h) Video Display Card: HD Graphics (VGA, HDMI) with a minimum of 64 MB of RAM.
 - i) Monitor: 22" W, 23.0 Inch VIS, Widescreen, VGA/DVI LCD Monitor.
 - j) Available Exp. Slots: System as configured above shall have at least two (2) full size PCI Slots available.
 - k) Network Interface: Integrated 10/100/1000 Ethernet card.
 - l) Other Peripherals: Optical scroll Mouse, 101 Key Keyboard, Mouse Pad and all necessary cables.
 - m) Software Requirement: Microsoft Windows 7 Professional SP1, 32 bit; Microsoft Office Professional 2010 or 2013; Microsoft Project 2010; Adobe Acrobat reader; Anti-Virus software package with 2 year updates subscription; and, either Auto Cad LT or Microsoft



Visio Standard Edition, as directed by the Resident Engineer.

- 4) DDC Field Office Specs: DDC Field Offices requiring computers shall be provided with the following:
 - a) One (1) broad-band internet service account. Wideband Internet connectivity at a minimum throughput of 15 Mbps download and 5 Mbps upload is required at each field office location with 1-5 staffers. For larger field offices see table below for minimum required upload speeds. Telephone service should be bundled together with Internet connectivity. Because of throughput requirements Verizon FIOS is the preferred connectivity provider where available.

Office Personnel #	Upload Speeds (Minimum)
1 – 5	5 Mbps
6 – 10	10 Mbps
11 – 15	15 Mbps
16 – 20 ...	20 Mbps

This account will be active for the life of the project. The e-mail name for the account shall be the DDC Field Office/project Id (e.g. FLD K HWK666 McGuinness@earthlink.com).

- b) One (1) 600 DPI HP Laser Jet Printer (twelve (12) pages per minute or faster) with one (1) Extra Paper (Legal Size)
 - c) All necessary cabling for equipment specified herein.
 - d) Storage Boxes for Blank CD's
 - e) Printer Table
 - f) UPS/Surge Suppressor combo
- 5) All computers required for use in the Engineer's Field Office shall be delivered, installed, and setup in the Field Office by the Contractor.
 - 6) All Computer Hardware shall come with a three (3) year warranty for on-site repair or replacement. Additionally, and notwithstanding any terms of the warranty to the contrary, the Contractor is responsible for rectifying all computer problems or equipment failures within one (1) business day.
 - 7) An adequate supply of blank CDs/DVDs, and paper and toner cartridges for the printer shall be provided by the Contractor, and shall be replenished by the Contractor as required by the Resident Engineer.
 - 8) It is the Contractor's responsibility to ensure that electrical service and phone connections are also available at all times; that is, the Field Office Computer(s) is to be powered and turned on twenty-four (24) hours each day.
 - 9) Broadband connectivity is preferred at each field office location. Please take into consideration that an extra phone line dedicated to the modem must be ordered as part of the contract unless Internet broadband connectivity, via Cable or DSL, is available at the planned field office location. Any questions regarding this policy should be directed to the Assistant Commissioner of Information Technology Services at 718-391-1761.
 - 10) Ownership: The equipment specified above shall, unless otherwise directed by the Commissioner, be the sole property of the City of New York upon delivery to the DDC Field Office. The Contractor shall prepare and maintain an accurate inventory of all equipment which it purchases for the DDC Field Office. Such inventory shall be provided to the City of New York. Upon completion of the



required services, as directed by the Commissioner, the Contractor shall turn such equipment over to the City of New York.

- E. HEAD PROTECTION (HARD HATS):
1. The Contractor shall provide a minimum of 10 standard protective helmets for the exclusive use of Department of Design and Construction personnel and their visitors. Helmets shall be turned over to the Resident Engineer and kept in the DDC Field Office.
 2. Upon completion of the project, the helmets shall become the property of the Contractor.

3.9 MATERIAL SHEDS:

- A. Material sheds used by the Contractor for the storage of its materials shall be kept at locations which will not interfere at any time with the progress of any part of the work or with visibility of traffic control devices.
- B. Store combustible materials apart from the facility.

3.10 TEMPORARY ENCLOSURES:

- A. Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather tight enclosure for building exterior.
- B. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.

3.11 TEMPORARY PARTITIONS:

- A. Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate occupied tenant areas from fumes and noise.
 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 2. Construct dustproof partitions with 2 layers of 3-mil (0.07-mm) polyethylene sheet on each side. Cover floor with 2 layers of 3-mil (0.07-mm) polyethylene sheet, extending sheets 18 inches (460 mm) up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant plywood.
 - a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches (1219 mm) between doors. Maintain water-dampened foot mats in vestibule.
 3. Insulate partitions to provide noise protection to occupied areas.
 4. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 5. Protect air-handling equipment.
 6. Weather strip openings.
 7. Provide walk-off mats at each entrance through temporary partition.

3.12 TEMPORARY FIRE PROTECTION:

- A. Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
- B. Prohibit smoking in all areas.
- C. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.



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- D. Develop and supervise an overall fire-prevention and protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
- E. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.13

3.13 WORK FENCE ENCLOSURE:

- A. The Contractor shall furnish, erect and maintain a wood construction or chain-link fence to the extent shown on the drawings or required by the work enclosing the entire project on all sides. All materials used shall be new. Any permit required for the installation and use of said fence and costs shall be borne by the Contractor.
- B. WOOD FENCE shall be 7'-0" high with framing construction of yellow pine, using 4" x 4" approved preservative-treated posts on not more than 6'-0" centers, with three (3) rails of at least 2" x 4" size to which shall be secured minimum 1/2 inch thick exterior grade plywood. Posts shall be firmly fixed in the ground at least 30" and thoroughly braced. Top edge of fence shall be trimmed with a rabbeted edge mould. Provide on the street traffic sides of fence, observation openings as directed.
 - 1. GATES - Provide an adequate number of double gates, complete with hardware, located as approved by the Resident Engineer. Double gates shall have a total clear opening of 14'-0" with two (2) 7'-0" hinged swinging sections. Hanging posts shall be 6" x 6" and shall extend high enough to receive and be provided with tension or sag rods for the swinging sections.
 - 2. PAINTING - The fence and gates shall be entirely painted on the street and public sides with one (1) coat of exterior primer and one (1) top coat of exterior grade acrylic-latex emulsion paint. Black stenciled signs reading "POST NO BILLS" shall be painted on fence with three (3) inch high letters on 25 foot spacing for the entire length of fence on street traffic sides. Signs shall be stenciled five (5) feet above the sidewalk.
- C. CHAIN-LINK FENCING shall be minimum 2-inch thick, galvanized steel, chain-link fabric fencing; 8 feet high with galvanized steel pipe posts; minimum 2-3/8-inch OD line posts and 2-7/8-inch OD corner and pull posts, with 1-5/8-inch OD top and bottom rails. Fence shall be accurately aligned and plumb, adequately braced and complete with gates, locks and hardware as required. Under no condition shall fencing be attached or anchored to existing construction or trees.
- D.
 - 1. It shall be the obligation of the Contractor to remove all posters, advertising signs, and markings, etc., immediately.
 - 2. Should the fencing be required to be relocated during the course of the Contract, it shall be done by the Contractor at no additional cost to the City.
 - 3. Where sidewalks are used for "drive over" purposes for Contractor vehicles, a suitable wood mat or pad shall be provided for protection of sidewalks and curbs.
 - 4. Where required, make provision for fire hydrants, lampposts, etc.
 - 5. REMOVAL - When directed by the Resident Engineer, the fence shall be removed.

3.14 RODENT AND INSECT CONTROL:

- A. DESCRIPTION: The Contractor shall provide all labor, materials, plant and equipment, and incidentals required to survey and monitor rodent activity and to control any infestation or outbreak of rodents, rats, mice, water beetles, roaches and fleas within the project area. Special attention should be paid to the following conditions or areas:



1. Wet areas within the project area, including all temporary structures.
 2. All exterior and interior temporary toilet structures within the project area.
 3. All Field Offices and shanties within the project area of all subcontractors and DDC.
 4. Wherever there is evidence of food waste and/or discarded food or drink containers, in quantity, that would cause breeding of rodents or the insects herein specified.
 5. Any other portion of the premises requiring such special attention.
- B. MATERIALS:
1. All materials shall be approved by the New York State Department of Environmental Conservation and comply with the New York City Health Code, OSHA and the laws, ordinances and regulations of State and Federal agencies pertaining to such chemical and/or materials.
- C. PERSONNEL:
1. All pest control personnel must be supervised by an exterminator licensed in categories 7A and 8.
- D. METHODS:
1. Application and dosage of all materials shall be done in strict compliance with the manufacturer's recommendations.
 2. Any unsanitary conditions, such as uncollected garbage or debris, resulting from all Contractor's activities, which will provide food and shelter to the resident rodent population shall be corrected by the Contractor immediately after notification of such condition by the Resident Engineer.
- E. RODENT CONTROL WORK:
1. In wetlands, woodlands and areas adjacent to a stream, special precautions must be taken to protect water quality and to ensure the safety of other wildlife. To prevent poisoned bait from entering streams, no poisoned bait shall be used in areas within seventy-five (75) feet of all stream banks. Live traps must be used in these seventy-five (75) foot buffer zone areas and within wetland and woodland areas.
 2. In areas outside the seventy-five (75) foot zone of protection adjacent to streams, and in areas outside wetlands and woodlands, tamper proof bait stations with poisoned bait shall be placed during the period of construction and any consumed or decomposed bait shall be replenished as directed.
 3. At least one month prior to initiation of the construction work, and periodically thereafter, live traps and/or rodenticide bait in tamper proof bait stations, as directed above, shall be placed at locations that are inaccessible to pets, human beings, children and other non-target species, particularly wildlife (for example-birds) in the project area.
 4. The Contractor shall be responsible for collecting and disposing of all trapped and poisoned rodents found in live traps and tamper proof bait stations. The Contractor shall also be responsible for posting and maintaining signs announcing the baiting of each particular location.
The Contractor shall be responsible for the immediate collection and disposal of any visible rodent remains found on streets or sidewalks within the project area.
 5. It is anticipated that public complaints will be addressed to the Commissioner. The Contractor, where directed by the Commissioner, shall take appropriate actions, like baiting, trapping, proofing, etc., to remedy the source of complaint within the next six (6) hours of normal working time which is defined herein for the purposes of this section as 7 A.M. to 6 P.M. on Mondays through Saturdays.
 6. Emergency service during the regular workday hours (Monday through Friday) shall be rendered within 24 hours, if requested by the Commissioner, at no additional cost to the City.



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F. EDUCATION & NOTICES:

1. The Contractor shall post notices on all Construction Bulletin Boards advising workers, employees, and residents to call the Engineer's Field Office to report any infestation or outbreak of rodents, rats, mice, water beetles, roaches and fleas within the project area. The Contractor shall provide and distribute literature pertaining to IPM techniques of rodent control to affected businesses and superintendents of nearby residential buildings to ensure their participation in maintaining their establishments free of unsanitary conditions, harborage removal and rodent proofing.
2. Prior to application of any chemicals, the Contractor shall furnish to the Commissioner copies or sample labels for each pesticide, antidote information, and Material Data Safety Sheets (MSDS) for each chemical used.

G. RECORDS

1. The Contractor shall keep a record of all rodent and waterbug infestation surveys conducted by him/her and make available, upon request, to the Commissioner. The findings of each survey shall include, but not be limited to, recommended Integrated Pest Management (IPM) techniques, like baiting, trapping, proofing, etc., proposed for rodent and waterbug pest control.
2. The Contractor shall maintain records of all locations baited along with the type and quantity of rodenticide and insecticide bait used.

3.15 PLANT PEST CONTROL REQUIREMENTS and TREE PROTECTION REQUIREMENTS:

A. Plant Pest Control Requirements: The Contractor and its subcontractors, including the Certified Arborist described below, shall comply with all Federal and New York State laws and regulations concerning Asian Longhorned Beetle (ALB) management, including protocols for ALB eradication and containment promulgated by the New York State Department of Agriculture and Markets (NYSDAM). The Contractor is referred to: (1) Part 139 of Title 1 NYCRR, Agriculture and Markets Law, Sections 18, 164 and 167, as amended, and (2) State Administrative Procedure Act, Section 202, as amended.

1. All tree work performed within the quarantine areas must be performed by New York State Department of Agriculture and Markets (NYSDAM) certified entities. Transportation of all host material, living, dead, cut or fallen, inclusive of nursery stock, logs, green lumber, stumps, roots, branches and debris of a half inch or more in diameter from the quarantine areas is prohibited unless the Contractor or its sub-contractor performing tree work has entered into a compliance agreement with NYSDAM. The terms of said compliance agreement shall be strictly complied with. Any host material so removed shall be delivered to a facility approved by NYSDAM. For the purpose of this contract host material shall be ALL species of trees.
2. Any host material that is infested with the Asian Longhorned Beetle must be immediately reported to NYSDAM for inspection and subsequent removal by either State or City contracts, at no cost to the Contractor.
3. Prior to commencement of tree work, the Contractor shall submit to the Commissioner a copy of a valid Asian Longhorned Beetle compliance agreement entered into with NYSDAM and the Contractor or its sub-contractor performing tree work. If any host material is transported from the quarantine area the Contractor shall immediately provide the Commissioner with a copy of the New York State 'Statement of Origin and Disposition' and a copy of the receipt issued by the NYSDAM approved facility to which the host materials are transported.
4. Quarantine areas, for the purpose of this contract shall be defined as all five boroughs of the City of New York. In addition, prior to the start of any tree work, the Contractor shall contact the



NYC Department of Parks & Recreation's Director of Landscape Management at (718) 699-6724, to determine the limits of any additional quarantine areas that may be in effect at the time when tree work is to be performed. The quarantine area may be expanded by Federal and State authorities at any time and the Contractor is required to abide by any revisions to the quarantine legislation while working on this contract. For further information please contact: NYSDAM (631) 288-1751.

- B. Tree Protection Requirements: The Contractor shall retain a Certified Arborist, as defined by New York City Department of Parks and Recreation (NYCDPR) regulations, to provide the services described below.
1. Surveys and Reports: The Certified Arborist shall, at the times indicated below, conduct a survey and prepare a plant material assessment report which includes: (1) identification, by species and pertinent measurements, of all plant material located on the project site, or in proximity to the project site, as described below, including all trees, significant shrubs and/or planting masses; (2) identification and plan for the containment of plant pests and pathogens, including the ALB, as described in paragraph A above; (3) evaluation of the general health and condition of any infected plant material.
 2. Frequency of Reports: The Certified Arborist shall conduct a survey and provide a plant material assessment report at two (2) points in time: (1) prior to the commencement of construction work; and (2) at the time of substantial completion. In addition, for projects exceeding 24 months in duration, the Certified Arborist shall conduct a survey and prepare a report at the midpoint of construction. Copies of each plant material assessment report shall be submitted to the Resident Engineer within two (2) weeks of the survey.
 3. Proximity to Project Site: Off-site trees, significant shrubs and/or planting masses shall be considered to be located in proximity to the project site under the circumstances described below.
 - a. The tree trunk, significant shrub, or primary cluster of stems in a planting mass is within 50 (fifty) feet of the project's Contract Limit Lines (CLLs) or Property Lines (PLs).
 - b. Any part of the tree or shrub stands within 50 (fifty) feet of: (a) a path for site access for vehicles and/or construction equipment; or (b) scaffolding to be erected for construction activity, including façade remediation projects.
 - c. The Certified Arborist determines that the critical root zone (CRZ) of an off-site tree, significant shrub, or primary cluster of stems in a planting mass extends into the project site, whether or not that plant material is located within the 50-foot inclusionary perimeter as outlined above.
 4. Tree Protection Plan: The Certified Arborist shall prepare, and the Contractor shall implement, a Tree Protection Plan, for all trees that may be affected by any construction work, excavation or demolition activities, including without limitation, (1) on-site trees, (2) street trees, as defined below, (3) trees under NYCDPR jurisdiction as determined by the Department of Transportation, and (4) all trees that are located in proximity to the project site, as defined above. The Tree Protection Plan shall comply with the NYC DPR rules, regulations and specifications. The Contractor is referred to Chapter 5 of Title 56 of the Official Compilation of the Rules of the City of New York. Copies of the Tree Protection Plan shall be submitted to the Resident Engineer prior to the commencement of construction. Implementation of the Tree Protection Plan for street trees and trees under NYCDPR jurisdiction shall be in addition to any tree protection requirements specified or required for the project site. For the purpose of this article, a "street tree" means the following: (1) a tree that stands in a sidewalk, whether paved or unpaved, between the curb lines or lateral lines of a roadway and the adjacent property lines



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of the project site, or (2) a tree that stands in a sidewalk and is located within 50 feet of the intersection of the project's site's property line with the street frontage property line.

- C. No Separate Payment. No separate payment shall be made for compliance with Plant Pest Control Requirements or Tree Protection Requirements. The cost of compliance with Plant Pest Control Requirements and Tree Protection Requirements shall be deemed included in the Contractor's bid for the Project.

3.16 PROJECT IDENTIFICATION SIGNAGE:

- A. The Contractor shall provide, install and maintain Project identification and other signs where indicated to inform public and individuals seeking entrance to the Project.
- B. In order to properly convey notice to persons entering upon a City construction site, the Contractor shall furnish and install a sign at the entrance (gates) as follows:

NO TRESPASSING

AUTHORIZED PERSONNEL ONLY

- C. If no construction fence exists at the site, this notice shall be conveyed by incorporating the above language into safety materials (barriers, tape, and signs).
- D. Provide temporary, directional signs for construction personnel and visitors.
- E. Maintain and touch up signs so that they are legible at all times.

3.17 PROJECT CONSTRUCTION SIGN AND RENDERING:

- A. PROJECT SIGN:
- 1 Responsibility: The Contractor shall produce and install one (1) project sign which shall be posted and maintained upon the site of the project at a place and in a position directed by the Commissioner. The Contractor shall protect the sign from damage during the continuance of work under the Contract and shall do all patching of lettering, painting and bracing thereof necessary to maintain the sign in first class condition and in proper position. Prior to fabrication, the Contractor shall submit an 8-1/2" x 11" color match print proof from the sign manufacturer of the completed sign for approval by the Commissioner.
 - 2 Sign Quality: The Contractor shall provide all materials required for the production of the sign as specified herein. Workmanship shall be of the best quality, free from defects and shall be produced in a timely manner.
 - 3 Schedule: Upon project mobilization, the Contractor shall commence production and installation of the sign.
 - 4 Removal: At the completion of all work under the Contract, the Contractor shall remove and dispose of the project sign away from the site.
 - 5 Sign construction:
 - a. Frame: The frame shall be from quality dressed 2"x2" pine, fire retardant, pressure treated lumber, that surrounds the inside back edge of the sign. The sign shall have one (1) intermediate vertical and two (2) diagonal supports, glued and screwed for rigidity. Frame shall be painted white with two (2) coats of exterior enamel paint, prior to mounting of sign panel.
 - b. Edging: U-shaped, 22 gauge aluminum edging, with a white enameled finish to match sign



- background, shall run around entire edging of sign panel and frame. Corners shall be mitered for a tight fit. Channel dimensions shall be 1" inch (overlap to sign panel face) x 1 3/4" (or as required across frame depth) x 1" (back overlap).
- c. Sign Panel: 4' x 8' panel shall be constructed in one (1) piece of 14 gauge (.0785") 6061-T6 aluminum. This panel shall be pre-finished both sides with a glossy white baked-on enamel finish and be flush with edge of 2" x 2" wood frame. Samples must be submitted for approval.
 - d. Fastening: Fasten sign panel to wood frame using cadmium plated no. 8 sheet metal screws at 1/2" below edge of panel and 8" on center. The U-shaped aluminum channel shall be applied over the wood frame edge and fastened with cadmium plated no. 8 sheet metal screws at 12" on center around the entire perimeter.
- 6 Sign Graphics:
- a. A digital file of the project sign will be provided to the Contractor by the Commissioner's representative for printing. The Commissioner's representative shall insert the project name and names and titles of personnel (3 or more) and any other required information associated with the project. All signs may include a second panel for a project rendering as described in Sub-Section 3.17.B herein.
 - b. The digital file shall be reproduced at the Sign Panel size of 4' x 8' on 3M High Performance Vinyl or approved equal. The 3M High Performance Vinyl or equivalent shall be guaranteed for nine (9) years. Guarantee must cover fading, peeling, chipping or cracking. The sign manufacturer is required to maintain all specified Pantone Matching System (PMS) type and other composition elements represented in the digital file of the project sign.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.17 B

B. PROJECT RENDERING:

- 1. Responsibility: In addition to the Project Sign, the Contractor shall furnish and install one (1) sign showing a rendering of the project. A digital file of the project rendering will be provided to the Contractor by the Commissioner's representative. From an approved image file provided by DDC, the Project Rendering is to be sized, printed, and mounted in an identical manner as described in Sub-Section 3.17.A above for the Project Sign. A color match print proof from the sign manufacturer of the Rendering Sign printed from the supplied file is to be submitted to DDC for approval before fabrication. The Rendering Sign is to be posted at the same height as the Project Sign. Where possible, the Rendering Sign shall be mounted with a perfect match of the short sides of the rectangle so that the Rendering Sign and the Project Sign together will create one long rectangle.
- 2. Removal: At the completion of all work under the Contract, the Contractor shall remove and dispose of the project rendering away from the site.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.18

3.18 SECURITY GUARDS/FIRE GUARDS ON SITE:

A. SECURITY GUARDS (WATCHMEN):

- 1. The Contractor shall provide competent Security Guard Service on the site, beginning on the date on which the Contractor commences actual construction work, or on such earlier date on which there is activity at the site related to the work, including without limitation, delivery of



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materials or construction set-up. The Contractor shall continue to provide such Security Guard Service until the date on which it completes all required work at the site, including all punch list work, as certified in writing by the Resident Engineer, or earlier if so directed in writing by the Commissioner. Throughout the specified time period, there shall be no less than one (1) Security Guard on duty every day, including Saturdays, Sunday and Holidays, 24 hours a day, except between the hours of 8:00 A.M. and 4:00 P.M. on any day which is a regular working day for a majority of the trade subcontractors. This exception during the working day shall not apply after the finishing painting of the plaster work is commenced; thereafter, not less than one (1) Security Guard shall be on duty continuously, 24 hours a day.

2. Every Security Guard shall be required to hold a "Certificate of Fitness" issued by the Fire Department. Every Security Guard shall, during his/her tour of duty, perform the duties of Fire Guard in addition to his/her security obligations.
 3. Should the Commissioner find that any Security Guard is unsatisfactory; such guard shall be replaced by the Contractor upon the written demand of the Commissioner.
 4. Each Security Guard furnished by the Contractor shall be instructed by the Contractor to include in his/her duties the entire construction site including the Field Office, temporary structures, and equipment, materials, etc.
 5. Should the Contractor or any other subcontractor consider the security requirements outlined above inadequate, the Contractor shall provide such additional security as it thinks necessary, after obtaining the written consent of the Commissioner. The additional cost of such approved increased protection will be paid by the Contractor.
 6. Nothing contained in this Sub-Section shall diminish in any way the responsibility of the Contractor and each subcontractor for its own work, materials, tools, equipment, nor for any of the other risks and obligations outlined hereinbefore in this Article.
- B. COSTS - The Contractor shall employ Security Guards/Fire Guards throughout the specified time period, except as otherwise modified by the detailed Specifications and as approved by the Commissioner, for the purpose of safeguarding and protecting the site. All costs for Security Guards/Fire Guards shall be borne by the Contractor.
- C. RESPONSIBILITY - The Contractor and its subcontractors will be responsible for safeguarding and protecting their own work, materials, tools and equipment.

3.19 SAFETY:

- A. The Contractor, in compliance with requirements of Section 01 35 26, SAFETY REQUIREMENTS PROCEDURES, shall provide and maintain all necessary temporary closures, guard rails, and barricades to adequately protect all workers and the public from possible injury. Any removal of these items, during the progress of the work, shall be replaced by the Contractor at no additional cost to the City.

END OF SECTION 01 50 00



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Division 01 – DDC STANDARD GENERAL CONDITION
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

No Text

TEMPORARY FACILITIES, SERVICES AND CONTROLS
01 50 00 -28



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SECTION 01 54 11
TEMPORARY ELEVATORS AND HOISTS

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This section includes the following:
1. Temporary Use, Operation and Maintenance of Elevators during Construction
 - a. For New Buildings up to 15 Stories
 - b. For New Buildings over 15 Stories
 - c. For Existing Buildings
 2. Temporary Construction Hoists and Hoist ways (For Material and Personnel)

1.3 RELATED SECTIONS: include without limitation the following:

- A. Section 01 10 00 SUMMARY
B. Section 01 42 00 REFERENCES
C. Section 01 50 00 TEMPORARY FACILITIES AND CONTROLS
D. Section 01 54 23 TEMPORARY SCAFFOLDS AND SWING STAGING
E. Section 01 77 00 CLOSE OUT PROCEDURES

PART II – PRODUCTS (Not Used)

PART III – EXECUTION

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.1

3.1 TEMPORARY USE, OPERATION AND MAINTENANCE OF ELEVATORS DURING CONSTRUCTION FOR NEW BUILDINGS UP TO AND INCLUDING 15 STORIES:

- A. **INSTALLATION:** The Contractor shall install, complete, operate, and maintain in good working order, as indicated herein, one (1) selected main elevator for the transport of employees of the Contractor and/or its subcontractors, and representatives of the DDC and other Governmental Agencies having jurisdiction of work at the project. The Contractor shall furnish, install, and maintain such elevator in good working order, including all necessary hoisting ropes, governor cables, traveling conductor cables, operating devices, temporary hand reset target annunciators, temporary signal devices, and all other permanent or temporary parts. The installation, operation and maintenance of the temporary elevator and all equipment and/or parts utilized in connection therewith shall be in accordance with the rules and regulations of all agencies and/or entities having jurisdiction over elevators in temporary use.
- B. **RESPONSIBILITY:** The Contractor shall be responsible for any injury to persons or damage to property arising out of the temporary elevator and all equipment and/or parts utilized in connection therewith.



- C. **COSTS:** The Contractor shall be responsible for all costs in connection with the temporary elevator, including without limitation: (1) installing and operating the temporary elevator, (2) maintaining the temporary elevator in clean, proper operating condition, including the cost of lubricants and/or parts for such maintenance, (3) performing all work in pits, shaft ways and machine rooms necessary for the operation of the temporary elevator, (4) replacing the temporary elevator or any equipment or parts utilized in connection therewith, if required, due to damage, destruction or excessive wear or corrosion, except for the replacement of hoisting ropes as set forth below, (5) performing all required electrical work in connection with the temporary elevator, (6) providing all electric power required to operate the temporary elevator, (7) providing all necessary conduit and wiring connections for the proper operation and signaling of the temporary elevator, and (8) providing all labor for the operation and maintenance of the temporary elevator, including on an overtime basis if necessary. The total Contract Price shall include all costs in connection with the temporary elevator, including without limitation, the costs specified herein.
- D. **COMMENCEMENT OF SERVICE:** The Contractor shall begin to provide temporary elevator service using the selected main passenger elevator no later than eight (8) weeks (40 working days) after the machine room roof slab, or that portion of it surrounding the elevator shaft, has been placed. No later than three (3) weeks (15 working days) after the machine room roof slab, or that portion of it surrounding the elevator shaft, has been placed the following work shall have been completed:
1. The shaft shall have been completely enclosed by either the permanent or a temporary enclosure meeting the requirements of the law.
 2. The machine room shall have been made completely watertight either by permanent or temporary construction. Beams or other devices, either permanent or temporary shall be provided which will enable the safe and practicable hoisting of the elevator machinery for installation.
 3. There shall have been installed on all floors at the shaft way entrances to the elevator, solid substantial frames and either sliding or swing doors with substantial hardware and door locks and any necessary approved wire mesh barricades for adjacent shaft ways.
 4. There shall have been furnished and installed solid substantial enclosures at front, back, sides and top of car platform enclosure, with emergency exit at top of car, excepting that the portion of the front at the elevator entrance shall have been provided with a substantial temporary door or gate.
- E. **ELECTRICAL INSTALLATION:** The Contractor, not later than 20 calendar days after the machine room roof slab or that portion of its surrounding the elevator has been placed, shall have furnished and installed temporary or permanent power and light feeders as required for the elevator used for temporary service and shall have connected such feeders to the terminals on the starter panels or controllers in the machine room to the low voltage transformers and car light outlets in the center of shaft way and for the car control and signal traveling cables. The Contractor shall make all these required connections as soon as the equipment is declared ready for such connections by the Resident Engineer.
- F. **REMOVAL:** When elevators for permanent use have been installed and are in condition for service, and when directed by the Commissioner, the Contractor shall remove the temporary enclosures and all temporary elevator equipment and promptly proceed with the installation of the permanent equipment as required under the Contract.
- G. **INSPECTION:** Before temporary elevator equipment is removed, a joint inspection of the equipment shall be made by the Contractor and the Commissioner to determine the condition of this equipment upon the discontinuation of its temporary use. If this inspection deems it necessary, the Contractor shall furnish and install new governor and compensating ropes, new traveling cables and new controller parts, etc. The car and counterweight safeties shall be thoroughly cleaned of all dirt and all foreign matter, then properly lubricated and placed in good operating condition to the satisfaction of the Commissioner. If it is determined and ordered by the Commissioner that new hoist ropes are required, such ropes shall be installed and payment therefore will be made in accordance with Article 26 of the Contract.



- H. **REPLACEMENT:** The Contractor shall furnish and install new equipment or parts for any equipment or parts of the temporary elevator installation that have been damaged, destroyed, or that indicate excessive wear or corrosion, excepting the replacement of hoisting ropes. All shaft ways, pits, motor rooms and sheave spaces used for temporary operation of elevators shall be thoroughly cleaned. Where lubricated rails are used they shall be washed down. If roller guides are used, all rust, dirt, etc., must be moved from the rails. The full cost of parts replacement, cleaning, etc., shall be borne by the Contractor except for the replacement of hoisting ropes.
- I. **LIMITATIONS ON USE:** The temporary elevator shall not be used during its operation for the hoisting of materials or the removal of rubbish, but shall be limited only to the transportation of employees of the Contractor and/or its subcontractors, and representatives of DDC and other Governmental Agencies having jurisdiction of work at the project. However, the Resident Engineer may grant special permission at specified times to the Contractor and/or its subcontractors to hoist materials, which in the Resident Engineer's opinion will not overload or damage the elevator installation, but only after such times as all plastering has been completed from the second floor up. In the event of any damage to the temporary elevator, the Contractor shall notify the Resident Engineer within 24 hours after such damage has occurred. As indicated above, the Contractor shall be responsible for the replacement of any equipment or parts of the temporary elevator that have been damaged.
- J. **LIQUIDATED DAMAGES:** The Contractor will be charged at the rate of \$100 per day for each day it fails to provide the temporary elevator service described in this section beginning with the 41st working day after the machine room roof slab, or that portion of it surrounding the elevator shaft, has been placed and stripped. This charge will be deducted from any amount due and owing to the Contractor.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.2

3.2 TEMPORARY USE, OPERATION AND MAINTENANCE OF ELEVATORS DURING CONSTRUCTION FOR NEW BUILDING OVER 15 STORIES:

- A. **INSTALLATION:** The Contractor shall install, complete, operate, and maintain in good working order, as indicated herein, two (2) selected main elevators for the transport of employees of the Contractor and/or its subcontractors, and representatives of the DDC and other Governmental Agencies having jurisdiction of work at the project. The Contractor shall furnish, install, and maintain such elevators in good working order, including all necessary hoisting ropes, governor cables, traveling conductor cables, operating devices, temporary hand reset target annunciators, temporary signal devices, and all other permanent or temporary parts. The installation, operation and maintenance of the temporary elevators and all equipment and/or parts utilized in connection therewith shall be in accordance with the rules and regulations of all agencies and/or entities having jurisdiction over elevators in temporary use. The two (2) elevators shall not be operated simultaneously.
- B. **RESPONSIBILITY:** The Contractor shall be responsible for any injury to persons or damage to property arising out of the temporary elevators and all equipment and/or parts utilized in connection therewith.
- C. **COSTS:** The Contractor shall be responsible for all costs in connection with the temporary elevators, including without limitation: (1) installing and operating the temporary elevators, (2) maintaining the temporary elevators in clean, proper operating condition, including the cost of lubricants and/or parts for such maintenance, (3) performing all work in pits, shaft ways and machine rooms necessary for the operation of the temporary elevators, (4) replacing the temporary elevators or any equipment or parts utilized in connection therewith, if required due to damage, destruction or excessive wear or corrosion, except for the replacement of hoisting ropes as set forth below, (5) performing all required electrical work in connection with the temporary elevators, (6) providing all electric power required to operate the temporary elevators, (7) providing all necessary conduit and wiring connections for the proper operation and signaling of the temporary elevators, and (8) providing all labor for the operation and maintenance of the temporary elevators, including on an overtime basis if necessary. The total Contract Price shall

include all costs in connection with the temporary elevators, including without limitation, the costs specified herein.

- D. **LOW RISE ELEVATOR:** The Contractor shall begin to provide temporary elevator service using one (1) selected main passenger elevator no later than six (6) weeks (30 working days) after the 12th Floor slab, or that portion of it surrounding the elevator shaft, has been placed and stripped. No later than one (1) week, five (5) working days, after the 12th Floor slab, or that portion of it surrounding the elevator shaft, has been placed and stripped the following work shall have been completed:
1. The shaft shall have been completely enclosed up to the 12th Floor by either the permanent or a temporary enclosure meeting the requirements of the law.
 2. A temporary machine room enclosure shall have been provided at the 11th Floor and shall have been made completely watertight either by permanent or temporary construction. Beams or other devices, either permanent or temporary, shall be provided which will enable the safe and practicable hoisting of the elevator machinery for installation.
 3. There shall have been installed on all floors up to and including the 9th Floor at the shaft entrances to the elevator, solid substantial wood frames and either sliding or swing doors with substantial hardware and door locks, also any necessary approved wire mesh barricades for adjacent shaft ways.
 4. There shall have been furnished and installed solid substantial enclosures at front, back, sides and top of car platform enclosure, with an emergency exit at top of car, excepting that the portion of the front at the elevator entrance shall have been provided with a substantial temporary door or gate.
- E. **ELECTRICAL INSTALLATION:** The Contractor not later than 10 calendar days after the 12th Floor slab or that portion of it surrounding the elevator, has been poured and stripped, shall have furnished and installed temporary or permanent power and light feeders as required for the elevator used for temporary service and shall have connected such feeders to the terminals on the starter panels or controllers in the temporary machine room, to the low voltage transformers and car light outlets in the center of the shaftway and for the car control and signal traveling cables. The Contractor shall make all these required connections as soon as the Equipment is declared ready for such connections by the Resident Engineer.
- F. **HIGH RISE ELEVATOR:** The Contractor shall begin to provide temporary elevator service to all floors, using a selected main passenger elevator, no later than eight (8) weeks (40 working days) after the machine room roof slab, or that portion of it surrounding the elevator shaft, has been placed. No later than three (3) weeks (15 working days) after the machine room roof slab, or that portion of it surrounding the elevator shaft, has been placed, the following work shall have been completed:
1. The shaft shall have been completely enclosed by either the permanent or temporary enclosure, meeting the requirements of the law.
 2. The machine room shall have been made completely watertight either by permanent or temporary construction. Beams or other devices, either permanent or temporary shall be provided which will enable the safe and practicable hoisting of the elevator machinery for installation.
 3. There shall have been installed on all floors at the shaft way entrances to the elevator, solid substantial frames and either sliding or swing doors with substantial hardware and door locks, also any necessary approved wire mesh barricades for adjacent shaft ways.
 4. There shall have been furnished and installed, solid substantial enclosures at front, back, sides and top of car platform enclosure, with an emergency exit at top of car, excepting that the portion of the front at the elevator entrance shall have been provided with a substantial temporary door or gate.
- G. **ELECTRICAL INSTALLATION:** The Contractor, not later than 20 calendar days after the machine room slab or that portion of it surrounding the elevator shaft has been placed, shall have furnished and installed temporary or permanent power and light feeders as required for the high rise elevator to be used for



- temporary service and shall have connected such feeders to the terminals on the motor-generator starter panels or controllers in the machine room, to the signal circuits low voltage transformers for the annunciators and car light outlets in the center of shaft way. The Contractor shall make all these required connections as soon as the equipment is declared ready for such connections by the Resident Engineer.
- H. When the high rise elevator is completed and ready for temporary operation, the low rise temporary elevator shall be shut down.
- I. REMOVAL: When one (1) or more elevators for permanent use have been installed and are in condition for service, and when directed by the Commissioner, the Contractor shall remove the temporary enclosures and all temporary elevator equipment, and promptly proceed with the installation of the permanent equipment as required under the Contract.
- J. INSPECTION: Before temporary elevator equipment is removed, a joint inspection of the equipment shall be made by the Contractor and the Commissioner to determine the condition of this equipment upon the discontinuation of its temporary use. If this inspection determines it necessary, the Contractor shall furnish and install new governor and compensating ropes, new traveling cables, new controller parts, etc. The car and counterweight safeties shall be thoroughly cleaned of all dirt and all foreign matter, then properly lubricated and placed in good operating condition to the satisfaction of the Commissioner. If it is determined and ordered by the Commissioner that new hoist ropes are required, such ropes shall be installed and payment therefore will be made in accordance with Article 26 of the Contract.
- K. REPLACEMENT: The Contractor shall furnish and install new equipment or parts for any equipment or parts of the temporary elevator installations that have been damaged, destroyed, or that indicate excessive wear or corrosion, excepting the replacement of hoisting ropes. All shaft ways, pits, motor rooms and sheaves spaces used for temporary operation of elevators shall be thoroughly cleaned down. Where lubricated rails are used they shall be washed down, if roller guides are used, all rust, dirt, etc., must be removed from the rails. The full cost of parts replacement cleaning, etc., shall be borne by the Contractor except for the replacement of hoisting ropes.
- L. LIMITATIONS ON USE: The temporary elevators shall not be used during their operation for the hoisting of materials or the removal of rubbish, but shall be limited only to the transportation of employees of the Contractor and/or its subcontractors, and representatives of DDC and other Governmental Agencies having jurisdiction of work at the project. However, the Resident Engineer may grant special permission at specified times to the Contractor and/or its subcontractors to hoist materials, which in the Resident Engineer's opinion will not overload or damage the elevator installation, but only after such times as all plastering has been completed from the second floor up. In the event of any damage to the temporary elevator, the Contractor shall notify the Resident Engineer within 24 hours after such damage has occurred. As indicated above, the Contractor shall be responsible for the replacement of any equipment or parts of the temporary elevator that have been damaged.
- M. LIQUIDATED DAMAGES: The Contractor will be charged at the rate of \$100 per day for each day it fails to provide the temporary elevator service described in this Section beginning with the 31st working day after the 12th Floor slab, or that portion of the 12th Floor slab surrounding the elevator shaft, has been placed and stripped. This charge will be deducted from any amount due and owing to the Contractor.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.3

3.3 TEMPORARY USE, OPERATION AND MAINTENANCE OF ELEVATORS DURING CONSTRUCTION FOR EXISTING BUILDINGS:

- A. The Contractor may use, at the Commissioner's discretion, one (1) selected elevator in the building for temporary operation by the Contractor for the transportation of employees of the Contractor and/or its subcontractors, and representatives of DDC and other Governmental Agencies having jurisdiction over the work at the Project. The operation of the temporary elevator and all equipment and/or parts utilized in



connection therewith shall be in accordance with the rules and regulations of all agencies and/or entities having jurisdiction over elevators in temporary use.

- B. **RESPONSIBILITY:** The Contractor shall be responsible for any injury to persons or damage to property arising out of the temporary elevator and all equipment and/or parts utilized in connection therewith.
- C. **REPLACEMENT:** The Contractor shall furnish and install new equipment or parts for any equipment or parts of the elevator for temporary operation that have been damaged, destroyed, or that indicate excessive wear or corrosion, excepting the replacement of hoisting ropes. All shaft ways, pits, motor rooms and sheave spaces used for temporary operation of elevators shall be thoroughly cleaned down. Where lubricated rails are used they shall be washed down, if roller guides are used, all rust, dirt, etc., must be moved from the rails. The full cost of parts replacement, cleaning, etc., shall be borne by the Contractor except for the replacement of hoisting ropes. If it is determined and ordered by the Commissioner that new hoist ropes are required, such ropes shall be installed and payment therefore will be made in accordance with Article 26 of the Contract.
- D. **LIMITATIONS ON USE:** The temporary elevator shall not be used during its operation for the hoisting of materials or the removal of rubbish, but shall be limited only to the transportation of employees of the Contractor and/or its subcontractors, and representatives of DDC and other Governmental Agencies having jurisdiction of work at the project. However, the Resident Engineer may grant special permission at specified times to the Contractor and/or its subcontractors to hoist materials, which in the Resident Engineer's opinion will not overload or damage the elevator installation. In the event of any damage to the temporary elevator, the Contractor shall notify the Resident Engineer within 24 hours after such damage has occurred. As indicated above, the Contractor shall be responsible for the replacement of any equipment or parts of the temporary elevator that have been damaged.
- E. **LIQUIDATED DAMAGES:** The Contractor will be charged at the rate of \$100 per day for each day it fails to provide elevator services described in this section beginning with 15 consecutive calendar days from Notice to Proceed. This charge will be deducted from any amount due and owing to the Contractor.

3.4 TEMPORARY HOISTS AND HOISTWAYS (FOR MATERIAL AND PERSONNEL):

- A. **RESPONSIBILITY:** The Contractor shall provide adequate numbers of material hoists for the most expeditious performance of all parts of the work including the work of all its subcontractors.
- B. **LOCATIONS:** No hoists shall be constructed at such locations as will interfere with, or affect the construction of, floor arches, or the work of subcontractors. The hoists may be located at the exterior sides of the structure or in the courtyard and extend upward adjacent to the line of window openings. The hoists shall be located a sufficient distance from the exterior walls and be so protected as to prevent any of the permanent work from being damaged, stained or marred.
- C. **ELEVATOR SHAFT:** Wherever possible, one or more of the permanent elevator shafts may be used as temporary hoist ways, providing such use complies with the requirements of the Building Code of the City of New York and has been approved by the Commissioner, and providing further it entails no interference with the progress of the work.
- D. **PROTECTION FOR INTERIOR HOISTS:** All interior material hoist ways shall be enclosed on each floor and shall be adequately protected with appropriate safety guards. In no event shall the protection be less than that required by law.

END OF SECTION 01 54 11



SECTION 01 54 23
TEMPORARY SCAFFOLDING AND PLATFORMS

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].
- B. Section 01 35 26: Safety Requirements Procedures.
- C. The Contractor shall comply with the requirements of "*The City of New York Department of Design and Construction Safety Requirements*". This document is included in the Information for Bidders.

1.2 SUMMARY:

- A. This Section includes administrative and general procedural requirements for Temporary Scaffolding and Platforms, including:
 - 1. Conformance
 - 2. Responsibility
 - 3. Jobsite Documentation and Submittals
 - 4. Inspections
- B. This Section governs ALL scaffold used on DDC project sites including, but not limited to, Suspended Scaffold, Supported Scaffold and Sidewalk Sheds.

1.3 CONFORMANCE:

- A. Unless otherwise indicated, the Contractor is responsible for providing, erecting, installing and maintaining all temporary scaffolding and platforms which shall comply with requirements of Chapter 33 (Safeguards During Construction or Demolition) of the NYC Building Code, NYC Local Law 52 of 2005, OSHA Construction Standard 1926 Subpart L, and furnishing the items and personnel set forth in this section.

1.4 RESPONSIBILITY:

- A. Jobsite Safety Coordinator: The Contractor shall designate and employ a Jobsite Safety Coordinator, who shall be a competent person, who shall have a daily presence on the project site during scaffold use. This designee must possess and maintain a valid New York City Department of Buildings supported scaffold certificate of completion. An alternate shall also be designated, in the event that the Jobsite Safety Coordinator is absent. The Jobsite Safety Coordinator shall:
 - 1. Verify completeness of documentation and submittals (as described below).
 - 2. Verify that inspections are performed, including pull tests (see below), reports are filed and reported deficiencies are corrected.
 - 3. Monitor trades using scaffold.
 - 4. Limit access to scaffold areas that are tagged for non-use.
 - 5. Inform trades of scaffold load limitations.
 - 6. Monitor loading of decks.
 - 7. Verify that any ties that are temporarily removed are properly restored in the same shift.
 - 8. Verify that outriggers and planks that are moved are properly set up and secured.
 - 9. Verify that all scaffold decks in use have proper access/egress.
 - 10. Verify that all open sides of decks in excess of 14 inches have proper guardrails and toe-boards.

11. Notify appropriate parties, including but not limited to the Resident Engineer, site safety coordinator / monitor, site safety consultant, scaffold users, contractor and the scaffold engineer, of misuses, non-conformances, hazards and accidents.
 12. Keep a log of significant actions and events connected with the scaffolding.
- B. The Contractor shall be responsible for erecting, maintaining and dismantling the scaffolding and/or sidewalk shed in conformance with requirements of the New York City Building Code, OSHA and the Contract documents, including the specifications. The Contractor shall also be guided by generally accepted standards of scaffold industry practice as promulgated by the Scaffold Industry Association.
- C. The Contractor shall require the subcontractor responsible for erecting the scaffolding to engage a Scaffold Engineer, licensed as a professional engineer by the State of New York. The Scaffold Engineer shall be responsible to ensure the following: (1) that the installation design is in compliance with requirements of the New York City Building Code and OSHA, (2) that the design comports with the capabilities of the components and the characteristics of the site, (3) that scaffold loads on the host building, including netting, have been properly considered, and (4) that the design documents provide accurate information for erectors and users.
- D. Scaffold users are trade contractors assigned to work on the scaffold. Training certificates from a New York City Department of Buildings approved training provider are mandatory. These users have the duty to become familiar with the New York City Building Code and OSHA requirements germane to users, to obey the instructions of the Jobsite Safety Coordinator and to inform the Jobsite Safety Coordinator of known hazards, non-conformances or violations.

1.5 JOBSITE DOCUMENTATION AND SUBMITTALS:

The Contractor shall prepare, obtain and submit the following to the Resident Engineer:

- A. NYC Department of Buildings permit(s) for scaffold and sidewalk sheds (as applicable) including filing applications signed and sealed by a Professional Engineer licensed in the State of New York;
- B. Site logistics plan / site safety plan;
- C. Installation drawing(s), design and product data to be provided for all scaffold(s) and shed(s) must include, at a minimum:
 1. Plan(s);
 2. Elevation(s);
 3. Duty load designation; "standard" (150 psf live load) or "heavy duty" (300 psf live load).
 4. Details including base support, anchors and ties;
 5. Notes and specifications including load limits, number of planked levels, tie spacing, netting, and sequence of installation and removal.
 6. Anchorage into sound material.
 7. Load limits based on pull tests;
 8. Specifications for pull test(s), method, proof load and the number of trials;
 9. Elevations, levels or heights, where anchorage is made into masonry;
 10. Specifications for frames, planks, screw jacks, anchors, and any other ancillary hardware;
 11. Samples for anchors, ties and netting;
 12. Sequence of operations for erection and demolition;
 13. Location plan, heights, widths, "jumps" over doorways and driveways;
 14. Specify size, maximum span and maximum spacing of headers and stringers;
 15. Specify legs, girts, braces, nailing and connections;
 16. All sidewalk sheds shall be designed, engineered, signed and sealed by a Professional Engineer licensed in the State of New York;
 - a. Generic (not job specific) engineering drawings are satisfactory for standard sheds and arrangements.



- b. Special engineering is required for custom sheds, site-specific problems or non-standard arrangements.

1.6 INSPECTIONS:

- A. Signed inspection reports shall be issued for each inspection and pull-test below, and shall be logged and maintained on site by the Jobsite Safety Coordinator for the duration of the project.
- B. Pull testing shall be required during design, and during or post erection, where anchorage is made into masonry. The Scaffold Engineer shall specify the test method, proof load and the number of trials.
- C. Sidewalk sheds shall be inspected after initial installation, major modification, or damage and thence every three months. Inspections shall be by a Scaffold Engineer for custom sheds and by a Competent Person employed by the Contractor for standard sheds.
- D. Scaffolds shall be inspected by the Scaffold Engineer during erection, post-erection and prior to use and thence every three months. The Scaffold Engineer shall repeat inspections after major alteration/modification, damage.
- E. A Qualified Person assigned by the Contractor shall inspect the progress of erection and dismantling, and the condition and integrity of the sidewalk sheds after high winds, major storms and at least once per month during usage.
- F. A Qualified Person assigned by the Contractor shall inspect the progress of erection and dismantling at least weekly, and the condition and integrity of the scaffold after high winds, major storms and at least once per month during usage.
- G. Scaffolds and Sidewalk Sheds shall be inspected daily by the Jobsite Safety Coordinator or alternate prior to use by scaffold users. The inspection results must be recorded in the maintenance log, and be available on-site at all times.
- H. At the completion of the project, submit all inspection documents as Miscellaneous Record Documents in accordance with Section 01 78 39, CONTRACT RECORD DOCUMENTS.

1.7 LADDERS AND STAIRS:

- A. The Contractor shall provide and maintain ladders or temporary stairs extending from the street to the first story, and to and from every floor and roof level of the project.

1.8 ACCESS AND EXITS:

- A. The ladders or temporary stairs shall be of acceptable size, number and location, so that proper and convenient access may be had by those required to proceed to and from all parts of the project.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 54 23



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Division 01 – DDC STANDARD GENERAL CONDITION
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

No Text

TEMPORARY SCAFFOLDING AND PLATFORMS
01 54 23 - 4



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Division 01 – DDC STANDARD GENERAL CONDITION
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

SECTION 01 73 00 EXECUTION

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes general procedural requirements governing execution of the Work including without limitation the following:
1. Delivery of Materials
 2. Contractor's Superintendent
 3. Surveys
 4. Borings
 5. Examination
 6. Environmental Assessment
 7. Preparation
 8. Deferred Construction
 9. Installation
 10. Permits
 11. Transportation
 12. Sleeves and Hangers
 13. Sleeve and Hanger Drawings
 14. Cutting and Patching
 15. Location of Partitions
 16. Furniture and Equipment
 17. Removal of Rubbish and Surplus Material
 18. Cleaning
 19. Security And Protection of Work Site
 20. Maintenance of Site and Adjoining Property
 21. Maintenance of Project Site
 22. Safety Precautions for Control Circuits
 23. Obstructions in Drainage Lines

1.3 RELATED SECTIONS: Include without limitation the following:

- | | | |
|----|------------------|--|
| A. | Section 01 10 00 | SUMMARY |
| B. | Section 01 31 00 | PROJECT MANAGEMENT AND COORDINATION |
| C. | Section 01 33 00 | SUBMITTAL PROCEDURES |
| D. | Section 01 74 19 | CONSTRUCTION WASTE MANAGEMENT & DISPOSAL |
| E. | Section 01 77 00 | CLOSEOUT PROCEDURES |
| F. | Section 01 78 39 | CONTRACT RECORD DOCUMENTS |



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.5 QUALITY ASSURANCE:

- A. Land Surveyor Qualifications: A professional land surveyor who is licensed in the State of New York and who is experienced in providing land-surveying services of the kind indicated.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION

3.1 DELIVERY OF MATERIALS:

- A. Material Orders: The Contractor shall furnish to the Commissioner a copy of each material order, indicating date of order and quantity of material, and shall also notify the Commissioner when materials have been delivered to the site and in what quantities.
- B. Ample Quantities: The Contractor shall deliver materials in ample quantities to insure the most prompt and uninterrupted progress of the work so as to complete the work within the Contract time.
- C. Containers: The manufacturer's containers shall be delivered with unbroken seals and shall bear proper labels.
- D. Deliveries: The Contractor shall coordinate deliveries in order to avoid delaying or impeding the progress of the work.
- E. Handling: The Contractor shall provide equipment and personnel to handle products by methods to prevent soiling or damage.
 - 1. Promptly inspect shipments to assure products comply with requirements, quantities are correct, and products are undamaged.
 - 2. Promptly return damaged shipments or incorrect orders to manufacturer.
 - 3. For materials or equipment to be reused or salvaged, use special care in removal, storage and reinstallation to insure proper function in completed work.
- F. Storage: Store products in accordance with provisions of Article 3.1, and periodically inspect to assure that stored products are undamaged and are maintained under required conditions.
- G. Stacking: All materials shall be properly stacked in convenient places adjacent to the site, or where directed, and protected in a satisfactory manner. Stacked materials shall be so arranged as to not interfere with visibility of traffic control devices.
- H. Overloading: If authority is given to store materials in any part of the project area, they shall be so stored as to cause no overloading.



- I. No Interference: If it becomes necessary to remove and restack materials to avoid impeding the progress of any part of the work or interfering with the work to be done by any trade subcontractor, the Contractor shall remove and restack such materials at no additional cost to the City.

3.2 CONTRACTOR'S CONSTRUCTION SUPERINTENDENT:

- A. Contractor's Construction Superintendent: The Contractor shall devote its time and personal attention to the work and shall employ and retain at the project site, from the commencement until the entire completion of the work, a Contractor's Construction Superintendent. The Contractor's Construction Superintendent shall be registered with the New York City Department of Buildings in compliance with the Construction Superintendent Rule of the City of New York and shall be competent and capable of maintaining proper supervision and care of the work and shall be acceptable to the Commissioner. The Construction Superintendent shall, in the absence of the Contractor, and irrespective of any superintendent or foreman employed by any subcontractor, shall see that the instructions of the Commissioner are carried out.
- B. Replacement: The Contractor's Construction Superintendent on the job shall not be changed or removed without the consent of the Commissioner.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.3

3.3 SURVEYS:

- A. Line and Grade: The City will establish a baseline and bench mark near the site of the work for use of the Contractor in connection with the performance of the work.
- B. Responsibility: The Contractor shall establish all other lines and elevations required for its work and shall be solely responsible for the accuracy thereof.
- C. Safeguard All Points: The Contractor shall safeguard all points, stakes, grade marks and bench marks made or established by the Contractor on the work, shall re-establish same if disturbed and bear the entire expense of rectifying the work improperly installed due to not maintaining, not protecting or removing without authorization such established points, stakes, or marks.
- D. City Monuments and Markers: No work shall be performed near City monuments or marks so as to disturb them until the said monuments or marks have been referenced or reset or otherwise disposed of by the relevant Agency or party who installed them.
- E. Foundations: The Contractor shall furnish certification from a licensed Surveyor that all portions of the foundation work are located in accordance with the Contract Drawings and at the elevations required thereby. This certification shall show the actual locations and the actual elevations of all the work in relation to the locations and elevations shown on the Contract Drawings, including but not restricted to the following:
 1. The locations and elevations of all piles, if any.
 2. Elevations of tops of all spread footings, tops of pile caps, and tops of all foundation walls, elevator pit walls and ramp walls.
 3. Location of all footing centers and pier centers including those for exterior wall columns.
 4. Location of all foundation walls including wall columns, elevator pit walls and ramp walls.
- F. Wall Lines: After the first courses of masonry or stone have been laid, the Contractor shall establish the permanent lines of exterior walls. The Contractor shall furnish promptly, certification from a licensed Surveyor, in the form of signed original drawings showing the exact location of such wall lines, of all portions of all structures. Except at its own risk, the Contractor shall not proceed further with the erection of walls until the Surveyor's certification has been submitted and verified for correct location of wall lines.



- G. Surveyor: The Surveyor selected for any of the purposes mentioned in Paragraph E and Paragraph F above, and Paragraph I below, shall be a land Surveyor licensed in the State of New York and shall be subject to the approval of the Commissioner. The Surveyor shall not be a regular employee of the Contractor, nor shall the Surveyor have any interest in the Contract. The Surveyor shall not be employed by the Contractor in laying out any work, it being intended that the Surveyor's certification shall represent an independent and disinterested verification of such layout. The Surveyor shall report to the Department of Design and Construction's Resident Engineer each time upon arrival to and departure from the site and review with the Resident Engineer the data required for the project.
- H. Final Certification: Final certification shall be submitted upon completion of the work or upon completion of any subdivision of the work as directed by the Commissioner. Any exceptions or deviations from the drawings shall be noted on the final certificate and there shall be included any maps, plates, notes, pertinent documents and data necessary, in the opinion of the Commissioner, to constitute a full and complete report.
- I. Final Survey: The Contractor shall submit to DDC for submission to the Department of Buildings a final Survey by the licensed Surveyor showing the location of the new Structure, before completion of the Structure. This Survey shall show the location of the first tier of beams or of the first floor; the finish grades of the open spaces on the plot; the established curb level and the location of all other Structures on the plan, together with the location and boundaries of the lot or plot upon which the Structure is constructed, curb cuts, all yard dimensions, etc.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.4

3.4 BORINGS:

- A. The work of this article shall be the responsibility of the Contractor unless otherwise indicated.
- B. Reference Drawings: The Boring Drawings as listed on the title sheet are for information to the bidder and are to be used under the conditions as follows:
 - 1. Boring Logs: shown on the Boring Drawings, record information obtained under engineering supervision in the course of exploration carried out by or under the direction of forces of the Department of Design and Construction at the site.
 - 2. Soils and Rock Samples: All inferences are drawn from the indications observed as made by engineering and scientific personnel. All such inferences and all records of the work including soil samples and rock cores, if any, are available to bidders for inspection.
 - 3. Certification of Samples: The City certifies that the work was carried out as stated, and that the soil samples and rock cores, if any were referred to, were actually taken from the site at the times, places and in the manner indicated. The samples are available for inspection in the Department of Design and Construction Subsurface Exploration Section.
 - 4. Bidder's Responsibility: The bidder, however, is responsible for any conclusions to be drawn from the work. If the bidder accepts those of the City, it must do so at its own risk. If the bidder prefers not to assume such risk, the bidder is under the obligation of employing its own experts to analyze the available information, and must be responsible for any consequences of acting on their conclusions.
 - 5. Continuity Not Guarantee: The City does not guarantee continuity of conditions shown at actual boring locations over the entire site. Where possible, borings are located to avoid all obstructions and previous construction which can be found by inspection of the surface and the bidder is required to estimate the influence of such features from its own inspection of the site.



3.5 EXAMINATION:

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground utilities and other construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with the subcontractor responsible for installation or application present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.6 ENVIRONMENTAL ASSESSMENTS:

- A. City Responsibilities: An Environmental Assessment and survey is performed by the NYC DDC and its findings are included in the Contract Documents. In accordance with the NYC Administrative Code Title 15 Chapter 1 an asbestos survey is required to be performed by an Asbestos Investigator certified by the NYC Department of Environmental Protection (DEP) to identify the presence of asbestos containing material (ACM) prior to any alteration, renovation or demolition activity. The findings of such survey are required for the submission of approvals and permits issued by the NYC Department of Buildings (DOB). When the findings indicate that asbestos containing material is present and will be disturbed during the alteration, renovation or demolition activity then abatement design specifications will be incorporated into the contract documents. The Contractor shall comply with all federal, state and local asbestos regulations affecting the work for this Contract.
- B. Contractor Responsibility: The Contractor shall comply with all federal, state and local environmental regulations, including without limitation USEPA and OSHA regulations which require the Contractor to assess if lead based paint will be disturbed during the work in order to protect his/her workers and the building occupants from migration of lead dust into the air. The Contractor shall comply with all federal, state and local environmental waste disposal regulation which may be required during the work. The Contractor is required to hire licensed abatement and disposal companies for the requisite work.

3.7 PREPARATION:

- A. Field Measurements: The Contractor shall verify all dimensions and conditions on the job so that all work will properly join the existing work.
- B. The Contractor, before commencing work, shall examine all adjoining work on which its work is in any way dependent on good workmanship in accordance to the intent of the Specifications and the Contract



Drawings. The Contractor shall report to the Commissioner any condition that will prevent it from performing work that conforms to the required standard.

- C. Existing Utility Information: Furnish information to the Commissioner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

3.8 DEFERRED CONSTRUCTION:

- A. Where necessity for deferred construction is certified by the Commissioner, in order to permit the installation of any item or items of equipment required to be furnished and installed concurrent with the time allowed for doing and completing the work of the Contract, the Contractor shall defer construction work limited to adequate areas as approved by the Commissioner.
- B. The Contractor shall confer with the affected trade subcontractors and ascertain arrangements, time and facilities necessary to be made by the Contractor in order to execute the provisions specified herein.

3.9 INSTALLATION:

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work and work of trade subcontractors to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by the Design Consultant.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.



- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.10 PERMITS:

- A. The Contractor shall comply with all local, state and federal laws, rules and regulations affecting the Work of this Project, including, without limitation, (1) obtaining all necessary permits for the performance of the Work prior to commencement thereof, and (2) complying with all requirements for the disposal of demolition and/or construction debris, waste, etc., including disposal in City landfills. The Contractor shall be responsible for all costs in connection with such regulatory compliance, unless otherwise specified in the Contract.

3.11 TRANSPORTATION:

- A. Availability: It shall be the duty of the Contractor to determine the availability of transportation facilities and dockage for the use of its employees, equipment and material and the conditions under which such use will be permitted.
- B. Costs: If transportation facilities and dockage are available and are permitted to be used by the governmental agency having jurisdiction, the Contractor shall pay all necessary costs and expenses, and abide by all rules and regulations promulgated in connection therewith.
- C. Vehicles: With respect to the use of vehicles on highways and bridges, the Contractor's attention is directed to the limitations set forth in the Rules of the City of New York, Title 34, Chapter 4, Section 4-15.
- D. Continued Use: It is understood that the Commissioner makes no warranty as to the continued use by the Contractor of such facilities.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.12

3.12 SLEEVES AND HANGERS:

- A. Coordinate with Progress Schedule: The Contractor shall promptly furnish and install conduits, outlets, piping sleeves, boxes, inserts and all other materials and equipment that is to be built into the work in conformity with the requirements of the project.
- B. Cooperation of Subcontractors: All subcontractors shall fully cooperate with each other in connection with the performance of the above work as "cutting in" new work is neither contemplated nor will it be tolerated.
- C. Timeliness: In the event that timely delivery of sleeves and other materials cannot be made, and to avoid delay, the Contractor may arrange to have boxes or other forms set at the locations where the piping or other material is to pass through or into the slabs, walls or other work. Upon the subsequent installation of the sleeves or other material, the Contractor shall fill around them with materials as required by the Contract. The necessary expenditures incurred for the boxing out and filling in shall be borne by the Contractor.
- D. Inserts: The Contractor is to install strip inserts four (4) feet on center and perpendicular to beams in ceiling slabs of boiler, machine and mechanical equipment rooms. Inserts are to be installed for strippable concrete slabs only.



REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.13

3.13 SLEEVE AND PENETRATION DRAWINGS:

- A. As soon as practicable after the commencement of work and when the order in which concrete for the first slabs, walls, etc. to be poured is determined, the Contractor shall submit to the DDC a sketch indicating the location and size of all penetrations for sleeves, ducts, etc. which will be required to accommodate the mechanical trades, in order to determine if such penetrations will materially weaken the project's structure. The sketch shall be stamped and returned if approved and/or comments will be transmitted. The Contractor shall continue to submit sketches as the pouring schedule and the concrete work progresses and, until approvals for the penetration sketches have been given. The Contractor shall not predicate its layout work on unapproved sketches.

3.14 CUTTING AND PATCHING:

- A. Responsibility: The Contractor shall do all cutting, patching and restoration required by its work, unless otherwise particularly specified in the Specifications.
- B. Restore Work: The Contractor shall restore any work damaged during the performance of the work.
- C. Competent Workers: All restoration work shall be done to the satisfaction of the Commissioner by competent workers skilled in the trade required by such restoration. If, in the judgment of the Commissioner, workers engaged in restoration work are incompetent, they shall be replaced immediately by competent workers.
- D. Structural Elements: Do not cut and patch structural elements without the prior approval, in writing, of the Resident Engineer.
- E. Operational Elements: Do not cut and patch operating elements and related components.
- F. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Commissioner's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- G. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.
- H. Removals: The Contractor must remove from the premises all demolished materials of every nature or description resulting from cutting, patching and restoration work, in accordance with the requirements hereinafter stipulated under Sub-Section 3.17 herein and as further required in Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.15

3.15 LOCATION OF PARTITIONS:

- A. Within three (3) weeks after the concrete slabs have been poured on each floor level, the Contractor shall immediately locate accurately all of the partitions, including the door openings, on the floor slabs in a manner approved by the Resident Engineer.



3.16 FURNITURE AND EQUIPMENT:

- A. Responsibility: The Contractor is responsible for moving all loose furniture and/or equipment in all areas where the location of such furniture and/or equipment interferes with the proper performance of its work.
- B. Protection: All such furniture and/or equipment must be adequately protected with dust cloths and returned to their original locations when directed to do so by the Resident Engineer.

3.17 REMOVAL OF RUBBISH AND SURPLUS MATERIALS:

- A. Of the waste that is generated during demolition, as many of the waste materials as economically feasible, and as stated here, shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized. Comply with requirements of Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.
- B. Rubbish: Rubbish shall not be thrown from the windows or other parts of the project. Mason's rubbish, dirt and other dust-producing material shall be wetted down periodically.
- C. Location: The Contractor shall clean Project site and work area daily and sweep up and deposit, at a location designated on each floor, all of its rubbish, debris and waste materials, as it accumulates and when directed by the Resident Engineer. Wood crating shall be broken up, neatly bundled, tied and stacked ready for removal and be deposited at a location designated on each floor.
 - 1. Comply with requirements in NYC Fire Department for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 degrees F (27 degrees C).
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- D. Laborers: The Contractor shall be responsible for the removal of all rubbish, etc., from the site. The Contractor shall remove from the designated locations all piles of rubbish, debris, waste material and wood crating as they accumulate and when directed by the Resident Engineer, and shall remove them from the site. The Contractor shall employ and keep engaged for this purpose an adequate number of laborers.
- E. Surplus Materials: The Contractor shall remove from the site all surplus materials when there is no further use for same.
- F. Tools And Materials: At the conclusion of the work, all erection plant, tools, temporary structures and materials belonging to the Contractor shall be promptly removed.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

3.18 CLEANING:

- A. The Contractor shall thoroughly clean all equipment and materials furnished and installed and shall deliver such materials and equipment undamaged in a clean and new appearing condition up to date of Final Acceptance.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- D. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.



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- E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration up to date of Final Acceptance.
- F. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration up to date of Final Acceptance.

3.19 SECURITY AND PROTECTION OF WORK SITE:

- A. Provide protection of installed work, including appropriate protective coverings and maintain conditions that ensure installed Work is without damage or deterioration up to date of Final Acceptance..
- B. Comply with manufacturer's written instructions for temperature and relative humidity.
- C. Secure and protect work and work site against damage, loss, injury, theft and/or vandalism.
- D. Maintain daily sign-in sheets of workers and visitors and make the sheets available to the Commissioner

3.20 MAINTENANCE OF SITE AND ADJOINING PROPERTY:

- A. The Contractor shall take over and maintain the Project site, after order to start work.
- B. The Contractor shall be responsible for the safety of the adjoining property, including sidewalks, paving, fences, sewers, water, gas, electric and other mains, pipes and conduits etc. until the date of Final Acceptance. The Contractor shall, at its own expense, except as otherwise specified, protect same and maintain them in at least as good a condition as that in which the Contractor finds them.
- C. All pavements, sidewalks, roads and approaches to fire hydrants shall be kept clear at all times, maintained and repaired to serviceable condition with materials to match existing.
- D. Provide and keep in good repair all bridging and decking necessary to maintain vehicular and pedestrian traffic.
- E. The Contractor shall also remove all snow and ice as it accumulates on the sidewalks within the Contract Limits Lines.

3.21 MAINTENANCE OF PROJECT SITE:

- A. The Contractor shall take over and maintain all project areas, after order to start work.
- B. Until the date of Final Acceptance, the Contractor shall be responsible for the safety of all project areas, including water, gas, electric and other mains and pipes and conduits and shall at the Contractor's own expense, except as otherwise specified, protect same and maintain them in at least as good condition as that in which the Contractor finds them.
- C. All pavements, sidewalks, roads and approaches to fire hydrants shall be kept clear at all times, maintained, and if damaged, repaired to serviceable conditions with materials to match existing.
- D. The Contractor shall keep the space for the Resident Engineer in a clean condition.

3.22 SAFETY PRECAUTIONS FOR CONTROL CIRCUITS:

- A. Control circuits, the failure of which will cause a hazard to life and property, shall comply with the New York City 2011 Electrical Code requirements.

3.23 OBSTRUCTIONS IN DRAINAGE LINES:

- A. The Contractor shall be responsible for all obstructions occurring in all drainage lines, fittings and fixtures after the installations and cleaning of these drainage lines, fittings and fixtures as certified by the Resident Engineer. Roof drains shall be kept clear of any and all debris. Any stoppage shall be repaired immediately at the expense of the Contractor.

END OF SECTION 01 73 00



SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This section includes administrative and procedural requirements for the management and disposal of construction waste and includes the following requirements:
1. Waste Management Goals
 2. Waste Management Plan
 3. Progress Reports
 4. Progress Meetings
 5. Management Plan Implementation
- B. This Section includes:
1. Definitions
 2. Waste Management Performance Requirements
 3. Reference Resources
 4. Submittals
 5. Quality Assurance
 6. Waste Plan Implementation
 7. Additional Demolition and Salvage Requirements
 8. Disposal

1.3 RELATED SECTIONS: Include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 31 00 PROJECT MANAGEMENT AND COORDINATION
- C. Section 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION
- D. Section 01 73 00 EXECUTION
- E. Section 01 77 00 CLOSEOUT PROCEDURES
- F. Section 01 78 39 CONSTRUCTION RECORD DOCUMENTS
- G. Section 01 81 13 SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- C. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk or the like.

- D. Construction and Demolition Waste: Solid wastes typically including building materials, trash debris and rubble resulting from remodeling, repair and demolition operations. Hazardous materials and land clearing waste are not included.
- E. Diversion from Landfill: To remove, or have removed, from the site for recycling, reuse or salvage, material that might otherwise be sent to a landfill.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product.
- G. Recycle (recycling): To sort, separate, process, treat or reconstitute solid waste and other discarded materials for the purpose of redirecting such materials into the manufacture of useful products. Recycling does not include burning, incinerating or thermally destroying waste.
- H. Return: To give back reusable items or unused products to vendors.
- I. Reuse: To reuse excess or discarded construction material in some manner on the Project site.
- J. Salvage: To remove a waste material from the Project site for resale or reuse.
- K. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable and reusable material.
- L. Waste Management Plan: A project-related plan for the collection, transportation and disposal of waste generated at the construction site. The purpose of the plan is to ultimately reduce the amount of material becoming landfill.

1.5 WASTE MANAGEMENT PERFORMANCE REQUIREMENTS:

- A. The City of New York has established that this project shall generate the least amount of waste possible and that processes that ensure the generation of as little waste as possible due to error, inaccurate planning, breakage, mishandling, contamination, or other factors shall be employed.
- B. Of the waste that is generated during demolition, as many of the waste materials as economically feasible, and as stated here, shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.

REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 1.5 C

- C. LEED CERTIFICATION: The City of New York will seek LEED (Leadership in Energy and Environmental Design) certification for this Project as indicated in the Addendum to the General Conditions from the U.S. Green Building Council. The documentation required here will be used for this purpose. LEED awards points for a variety of sustainable design measures on a project, one of which is the reuse and recycling of project waste.
- D. DIVERSION REQUIREMENTS. A minimum of 75% of total Project demolition waste (by weight) shall be diverted from landfill. The following waste categories are likely candidates to be included in the diversion plan as applicable for this project:
 - 1. Concrete
 - 2. Bricks
 - 3. Concrete masonry units (CMU)
 - 4. Asphalt
 - 5. Metals (e.g. banding, stud trim, ceiling grid, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, brass, bronze)

6. Clean dimensional wood
 7. Carpet and pad
 8. Drywall
 9. Ceiling tiles
 10. Cardboard, paper, and packaging
 11. Reuse items indicated on the Drawings and/or elsewhere in the Specification
- E. All fluorescent lamps, HID lamps and mercury-containing thermostats removed from the site shall be recycled.
- F. Recycling on the job, subject to the Commissioner's approval, is encouraged on the site itself, such as the crushing and reuse of removed sound concrete and stone. Include these categories in the Waste Management Plan.

1.6 REFERENCES, RESOURCES:

- A. DDC encourages its contractors to seek information from websites and experts in salvage or recycling in order to minimize disposal costs. There are numerous opportunities to sell, salvage, or to donate materials and accrue tax benefits (which would accrue to the contractor); also there are outlets that will pick up, and in some cases buy recyclable materials. Examples of information resources are as follows:
1. DDC's Sustainable Design web site:
http://www.nyc.gov/html/ddc/html/design/sustainable_home.shtml This includes a manual on Construction and Demolition Waste Reduction and Recycling, a Sample Waste Management Plan and sample C&D Waste Management log. A standard Construction and Demolition Waste Management Log form is included at the end of this section.
 2. Web Resources
(Information only; no warranty or endorsement is implied.)
www.wastematch.org Site of New York Waste Match, a materials exchange database and service
www.bignyc.org Site of Build It Green NYC, a non-profit outlet for salvaged and surplus building materials
www.usgbc.org Site of the United States Green Building Council, with a description of the LEED certification process and requirements for C&D waste recycling
www.epa.gov/epawaste/index.htm Site of the U.S. Environmental Protection Agency that discusses construction and demolition waste issues, and links to other resources.

1.7 SUBMITTALS:

- A. The Contractor shall be responsible for the development and implementation of a Waste Management Plan for the Project. The Contractor's subcontractors shall assist in the development of that Plan, and collect and deposit their waste and recyclable materials in accordance with the approved Plan.
- B. DRAFT WASTE MANAGEMENT PLAN. Within fifteen (15) days after receipt of 'Notice to Proceed', or prior to any waste removal, whichever occurs sooner, the Contractor shall submit to the Commissioner a Draft Waste Management Plan. Include separate sections for demolition and construction waste. The Plan shall demonstrate how the performance goals will be met, and contain the following:



1. List of materials targeted for reuse, salvage, or recycling, and names, addresses, and phone numbers of receiving facilities/companies that will be purchasing or accepting each material.
 2. Description of onsite and/or offsite sorting methods for all materials to be removed from site.
 3. If mixed construction and demolition waste is to be sorted off-site, provide a letter from the processor stating the average percentage of mixed construction and demolition waste they recycle.
 4. Landfill information: Names of landfills where non-recyclable/reusable/salvageable waste will be disposed, and list of applicable tipping fees.
 5. Materials handling procedures: A description of the means by which any recyclable, salvaged, or reused materials will be protected from contamination, and collected in a manner that will meet the requirements for acceptance by the designated recycling processors.
 6. Transportation: A description of the means of transportation and destination for recycled materials.
 7. Meetings: Description of regular meetings to be held to address waste management.
 8. Sample spreadsheet and description of how the implementation of the plan will be documented on a monthly basis.
- C. FINAL WASTE MANAGEMENT PLAN. Within fifteen (15) days of Commissioner's approval of the Draft Plan, the Contractor shall submit a Final Waste Management Plan.
- D. PROGRESS REPORTS. The Contractor shall submit monthly a Waste Management Progress Report, containing the following information:
1. Project title, name of company completing report, and dates of period covered by the report
 2. Report on the disposal of all jobsite waste. A DDC C&D Waste Management Log form is available on the DDC Sustainable Design website and included at the end of this section. For each shipment of material removed from the site, provide the following:
 - a. Date and ticket number of removal
 - b. Identity of material hauler
 - c. Material Category
 - d. Total quantity of waste, in tones/cubic yards, by type
 - e. Quantity of waste salvaged, recycled and/or reused, by type
 - f. Total quantity of waste diverted from landfill (recycled, salvaged, reused) as a percentage of total waste
 - g. Recipient of each material type
 3. Provide monthly and cumulative project totals of waste, quantity diverted, and percentage diverted.
 4. Note that the unit of measure may be either tons or cubic yards, but must be consistent for all shipments and all materials throughout the project. Reports with inconsistent or mixed units will not be reviewed and will be returned for re-submission.
 5. Include legible copies of on-site logs, weight tickets and receipts. Receipts shall be from charitable organizations, recycling and/or disposal site operators who can legally accept the materials for the purpose of reuse, recycling or disposal. Contractor shall save such original documents for the life of the project plus seven (7) years.
- E. LEED Submittal: For LEED designated projects submit LEED Letter Template for the applicable credit, signed by the Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.
- F. Refrigerant Recovery. Submit Qualification data for Refrigerant recovery technician and statement of refrigerant recovery, signed by the refrigerant recovery technician responsible for recovering refrigerant



stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.8 QUALITY ASSURANCE:

- A. The Contractor shall designate a Waste Management Coordinator, to ensure compliance with this section. Coordinator shall be present at Project site full time for the duration of the project.
- B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- C. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- D. Waste management plans, documentation and implementation shall be discussed at the following meetings:
 - 1. Pre-demolition kick-off meeting
 - 2. Pre-construction kick-off meeting
 - 3. Regular job-site meetings
 - 4. Contractor toolbox meetings

PART II – PRODUCTS (Not Used)

PART III – EXECUTION

3.1 WASTE PLAN IMPLEMENTATION:

- A. The Contractor shall implement the Waste Management Plan, coordinate the Plan with all affected trades, and designate one individual as the Construction Waste Management Representative, who will be responsible for communicating the progress of the Plan with the Commissioner on a regular basis, and for assembling the required LEED documentation.
- B. The Contractor shall be responsible for the provision of containers and the removal of all waste, non-returned surplus materials, and rubbish from the site in accordance with the approved Waste Management Plan. The Contractor shall oversee and document the results of the Plan. Monies received for salvaged materials shall remain with the Contractor, except the monies for those items specifically identified elsewhere in the specifications, or indicated on the drawings as belonging to others.
- C. Responsibilities of Subcontractors: Each subcontractor shall be responsible for collecting its waste, non-returned surplus materials, and rubbish, in accordance with the Waste Management Plan.
- D. Distribution. The Contractor shall distribute copies of the Waste Management Plan to each Subcontractor, Resident Engineer, Construction Manager, and Commissioner.
- E. Training. The Contractor shall provide on-site instruction of proper waste management procedures to be used by all parties in appropriate stages of the Project.
- F. Procedures. Conduct waste management operations to ensure minimum interference with site vegetation, roads, streets, walks and other adjacent occupied and used facilities.
 - 1. Collect co-mingled waste and/or separate all recyclable waste in accordance with the Plan. Specific areas on the Project site are to be designated, and appropriate containers and bins clearly marked with acceptable and unacceptable materials.
 - 2. Inspect containers and bins for contamination and remove contaminated materials if found.



3. Comply with the General Conditions for controlling dust and dirt, environmental protection, and noise control.

3.2 ADDITIONAL DEMOLITION AND SALVAGE REQUIREMENTS:

- A. Demolition and salvage of additional items indicated in other sections of the Project Specifications require special attention as part of the overall 75 % diversion from landfill. Specific requirements for special attention are designated in other sections of the Project Specifications.

3.3 DISPOSAL:

- A. General. Except for items or material to be salvaged, recycled or otherwise reused, remove waste material from the Project site and legally dispose of them in a manner acceptable to authorities having jurisdiction.
 1. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate on site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning. Do not burn waste materials
- C. Disposal. Transport waste materials off Project Site and legally dispose of them.

END OF SECTION 01 74 19



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CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT LOG

No Text



**SECTION 01 77 00
CLOSEOUT PROCEDURES**

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes administrative and general procedural requirements for Closeout Procedures, including without limitation the following:
1. Definitions
 2. Substantial Completion
 3. Final Acceptance
 4. Warranties
 5. Final Cleaning
 6. Repair of the Work
- B. LEED: Refer to the Addendum to identify whether this project is designed to comply with a Certification Level according to the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Rating System, as specified in Section 01 81 13, "SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS."
- C. COMMISSIONING: Refer to the Addendum to identify whether this project will be commissioned by an independent third party under separate contract with the City of New York. Commissioning shall be in accordance with ASHRAE and USGBC LEED- NC procedures, as described in Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS. The Contractor shall cooperate with the commissioning agent and provide whatever assistance is required.

1.3 RELATED SECTIONS: include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 33 00 SUBMITTAL PROCEDURES
- C. Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT & DISPOSAL
- D. Section 01 78 39 CONTRACT RECORD DOCUMENTS
- E. Section 01 79 00 DEMONSTRATION AND OWNER'S PRE-ACCEPTANCE ORIENTATION

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or



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combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

- C. Substantial Completion: shall mean the written determination by the Commissioner that the Work required under the Contract is substantially, but not entirely, complete.
- D. Final Acceptance: shall mean final written acceptance of all the Work by the Commissioner, a copy of which shall be sent to the Contractor.

1.5 SUBSTANTIAL COMPLETION:

- A. Preliminary Procedures: Before requesting inspection to determine the date of Substantial Completion, the Contractor shall complete and supply all items required by the contract specifications, General Conditions, Addendum to the General Conditions, change orders or other directives from the Commissioner's representatives. The required items will include all contract requirements for substantial completion, including but not limited to items related to releases, regulatory approvals, warranties and guarantees, record documents, testing, demonstration and orientation, final clean up and repairs, and all specific checklist of items by the Resident Engineer. (See Attachment "A" at the end of this section for sample requirements for Substantial Completion).
- B. Prepare and submit a list to the Resident Engineer of incomplete items, the value of incomplete construction, and reasons the work is not complete.
- C. Inspection: The Contractor shall submit to the Resident Engineer a written request for inspection for Substantial Completion. Within ten (10) days of receipt of the request, the Resident Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. The Resident Engineer may request the services, as required, of the Design Consultant, Client Agency Representative and/or other entities having involvement with the Work to assist in the inspection of the Work. If the Resident Engineer makes a determination that the work is substantially complete and approves the Final Punch List and the date for Final Acceptance, he/she will so advise the Commissioner and recommend issuance of the Certificate of Substantial Completion. If the Resident Engineer determines that the work is not substantially complete, he/she will notify the Contractor of those items that must be completed or corrected before the Certificate of Substantial Completion will be issued.
 - 1 Re-inspection: Contractor shall request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2 Results of completed inspection will form the basis of requirements for Final Acceptance.

1.6 FINAL ACCEPTANCE:

- A. Preliminary Procedures: Before requesting final inspection for Final Acceptance of the Work, the Contractor shall complete the following. (Note that the following are to be completed, submitted as appropriate, and approved by the Commissioner, as applicable, prior to the final inspection and are not to be submitted for approval or otherwise at the final inspection unless specifically indicated). List exceptions in the request.
 - 1. Verify that all required submittals have been provided to the Commissioner including but not limited to the following:
 - a. Manufacturer's cleaning instructions
 - b. Posted instructions
 - c. As-built Record Documents (Drawings, specifications, and product data) as described in Section 01 78 39, CONTRACT RECORD DOCUMENTS, incorporating any changes required by the Commissioner as a result of the review of the submission prior to the pre-final inspection.
 - d. Operation and Maintenance Manuals, including Preventive Maintenance, Special Tools, Repair Requirements, Parts List, Spare Parts List, and Operating Instructions.



- e. Completion of required Demonstration and Orientation, as applicable, of designated personnel in operation and maintenance of systems, sub-systems and equipment.
 - f. Applicable LEED Building submittals as described in Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS.
 - g. Construction progress photographs as described in Section 01 32 33, PHOTOGRAPHIC DOCUMENTATION.
2. Submit a certified copy of the final approved Punch List of items to be completed or corrected. The certified copy of the Punch List shall state that each item has been completed or otherwise resolved for acceptance, and shall be endorsed and dated by the Contractor.
 3. Submit pest-control final inspection report and survey as required in Section 01 50 00, TEMPORARY FACILITIES AND CONTROLS.
 4. Submit record documents and similar final record information.
 5. Deliver tools, spare parts, extra stock and similar items.
 6. Complete final clean-up requirements including touch-up painting of marred surfaces.
 7. Submit final meter readings for utilities, as applicable, a measured record of stored fuel, and similar data as of the date when the City took possession of and assumed responsibility for corresponding elements of the work.
- B. Final Inspection: The Contractor shall submit to the Resident Engineer a written request for inspection for Final Acceptance of the Work. Within ten (10) days of receipt of the request, the Resident Engineer will either proceed with inspection or notify the Contractor of unfulfilled requirements. The Resident Engineer may request the services, as required, of the Design Consultant, Client Agency Representative and/or other entities having involvement with the Work to assist in the inspection of the Work. If the Resident Engineer finds that all items on the Final Approved Punch List are complete and no further work remains to be done, he/she will so advise the Commissioner and recommend the issuance of the determination of Final Acceptance. If the Resident Engineer determines that the work is not complete, he/she will notify the Contractor of those items that must be completed or corrected before the determination of Final Acceptance will be issued.
- C. Final Acceptance: The Work will be accepted as final and complete as of the date of the Resident Engineer's inspection if, upon such inspection, the Resident Engineer finds that all items on the Punch List are complete and no further Work remains to be done. The Commissioner will then issue a written determination of Final Acceptance.

1.7 WARRANTIES:

- A. The items of materials and/or equipment for which manufacturer warranties are required are listed in Schedule B of the Addendum. For each item of material and/or equipment listed in Schedule B, the Contractor shall obtain a written warranty from the manufacturer. Such warranty shall provide that the material or equipment is free from defects for the period set forth in Schedule B and will be replaced or repaired within such specified period. The contractor shall deliver all required warranties to the Commissioner.
- B. Unless indicated otherwise Warranties are to take effect on the date of Substantial Completion.
- C. Submittal Time: Submit written Warranties on request of the Commissioner for designated portions of the Work where commencement of Warranties other than date of Substantial Completion is indicated.
- D. Partial Occupancy: Submit properly executed Warranties to the Commissioner within 15 days of completion of designated portions of the Work that are completed and occupied or used by the City.
- E. Organize the Warranty documents into an orderly sequence based on the Project Specification Divisions and Section Numbers.



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1. Bind Warranties in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES;" name and location of Project; Capitol Budget Project Number (FMS ID); and Contractor's and applicable subcontractor's name and address.
 3. Provide heavy paper dividers with plastic-covered tabs for each separate Warranty. Mark tab to identify the product or installation.
 4. Provide a typed description of each product or installation being warranted, including the name of the product, and the name, address, and telephone number of the Installer.
- F. When warranted materials and/or equipment require operation and maintenance manuals, provide additional copies of each required Warranty in each required manual. Refer to Section 01 78 39, CONTRACT RECORD DOCUMENTS, for requirements of Operation and Maintenance Manuals.

PART II – PRODUCTS

2.1 MATERIALS:

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART III – EXECUTION

3.1 FINAL CLEANING:

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations, as applicable, before requesting inspection for Final Acceptance of the Work for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.



- j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - m. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - n. Replace parts subject to unusual operating conditions.
 - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - q. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - s. Leave Project clean and ready for occupancy.
 - t. Construction Waste Disposal: Comply with waste disposal requirements in Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests, as required in Section 01 50 00, TEMPORARY FACILITIES, SERVICES AND CONTROLS. Prepare and submit a Pest Control report to the Commissioner.
- D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on City's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

3.2 REPAIR OF THE WORK:

- A. Subject to the terms of the Contract the Contractor shall complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Contractor shall repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.



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3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 01 77 00

CLOSEOUT PROCEDURES
01 77 00 -6

SECTION 01 77 00

ATTACHMENT 'A'

The following list is a general sample of Substantial Completion requirements, including but not limited to:

1. Prepare and submit a list to the Resident Engineer, of incomplete items, the value of incomplete construction, and reasons the work is not complete.
2. Obtain and submit any necessary releases enabling the City unrestricted use of the project and access to services and utilities.
3. Regulatory Approvals: Submit all required documentation from applicable Governing Authorities, including, but not limited to, Department of Buildings (DoB); Department of Transportation (DoT); Department of Environmental Protection (DEP); Fire Department (FDNY); etc. Documentation to include, but not limited to, the following:
 - a. Building Permits, Applications and Sign-offs.
 - b. Permits and Sign-off for construction fences; sidewalk bridges; scaffolds, cranes and derricks; utilities; etc.
 - c. Certificates of Inspections and Sign-offs.
 - d. Required Certificates and Use Permits.
 - e. Certificate of Occupancy (C.O.), Temporary Certificate of Occupancy (T.C.O.) or Letter of Completion as applicable.
4. Submit specific warranties required by the specifications, final certifications, and similar documents.
5. Prepare and submit Record Documents as described in Section 01 78 39, CONTRACT RECORD DOCUMENTS, including but not limited to; approved documentation from Governing Authorities; as-built record drawings and specifications; product data; operation and maintenance manuals; Final Completion construction photographs; damage or settlement surveys; final property surveys; and similar final record information. The Resident Engineer will review the submission and provide appropriate comments. If comments are significant the initial submission will be returned to the Contractor for correction and re-submission incorporating the comments prior to the Final Inspection.
6. Record Waste Management Progress Report: Submit C&D Waste Management logs, with legible copies of weight tickets and receipts required in accordance with Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.
7. If applicable submit LEED Letter Template in accordance with the requirements of Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS.
8. Schedule applicable Demonstration and Orientation required in other Sections of the Project Specifications and as described in Section 01 79 00, DEMONSTRATION AND OWNER'S PRE-ACCEPTANCE ORIENTATION.
9. Deliver tools, spare parts, extra materials, and similar items to location designated by Resident Engineer. Label with manufacturer's name and model number where applicable.
10. Make final changeover of permanent locks and deliver keys to the Resident Engineer. Advise Commissioner of changeover in security provisions.
11. Complete startup testing of systems as applicable.
12. Submit approved test/adjust/balance records.
13. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements as directed by the Resident Engineer.
14. If applicable complete Commissioning requirements as defined in Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS.
15. Complete final cleaning requirements, including touchup painting.
16. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.



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No Text

CLOSEOUT PROCEDURES
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SECTION 01 78 39
CONTRACT RECORD DOCUMENTS

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes administrative and general procedural requirements for Contract Record Documents, including:
1. As-built Contract Record Drawings.
 2. As-built marked-up copies of Record Specifications, addenda and Change Orders.
 3. As-built marked-up Product Data
 4. Record Samples
 5. Construction Record Photographs
 6. Operating and Maintenance Manuals
 7. Final Site Survey
 8. Guarantees and Warranties
 9. Waste Disposal Documentation
 10. LEED Materials and Matrix
 11. Miscellaneous Record Submittals
- B. The Department of Design and Construction, at the start of construction (kick-off meeting), will furnish to the Contractor at no cost a complete set of Contract Drawings Mylars (reproducible) pertaining to the work to be performed under the Contract. It is the responsibility of the Contractor to modify the Contract Drawings to indicate all changes and corrections, if any, occurring in the work as actually installed. The Contractor is required to furnish all other Mylar (reproducible) drawings, if necessary, such as Addenda Drawings and Supplementary Drawings as may be necessary to indicate all work in detail as actually completed. All professional seals must be blocked out. Title box complete with project title and Design Consultants' names will remain.
- C. Maintenance of Documents and Samples: The Contractor shall maintain, during the progress of the work, an accurate record of the work as actually installed, on Contract Record Drawings, on Mylar (reproducible), in ink. Store record documents and samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition. Make documents and samples available at all times for the Resident Engineer's inspections.

The Contractor's attention is particularly directed to the necessity of keeping accurate records of all subsurface and concealed work, so that the Contract Record Drawings contain this information in exact detail and location. Contract Record Drawings shall also show all connections, valves, gates, switches, cut-outs and similar operating equipment.

For projects designated to achieve a LEED rating the Contractor shall receive a copy of the project's LEED scorecard for the purpose of monitoring compliance with the target objectives and to facilitate coordination with the LEED Consultant. The Contractor shall receive periodic updates of this scorecard,



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and is required to submit the final version of the Scorecard at Substantial Completion with other project Record Documents.

1.3 RELATED SECTIONS: include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION
- C. Section 01 32 33 PHOTOGRAPHIC DOCUMENTATION
- D. Section 01 33 00 SUBMITTAL PROCEDURES
- E. Section 01 77 00 PROJECT CLOSEOUT PROCEDURES

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.5 SUBMITTALS:

A. As-Built Contract Record Drawings: Comply with the following:

1. Progress Submission: As directed by the Resident Engineer, submit progress As-Built Contract Record Drawings at the 50% Construction Completion stage.
2. Final Submission: Before substantial completion payment, the Contractor shall furnish to the Commissioner one (1) complete set of marked-up Mylar (reproducible) As-Built Contract Record Drawings, in ink indicating all of the work and locations as actually installed, plus one (1) set of paper prints which will be furnished to the sponsoring agency by DDC.
3. As-Built Contract Record Drawings shall be of the same size as that of the Contract Drawings, with a one (1) inch margin on three (3) sides and a two (2) inch margin on the left side for binding.
4. Each As-Built Contract Record Drawing shall bear the legend "AS-BUILT CONTRACT RECORD DRAWING" in heavy block lettering, one half (1/2) inch high, and contain the following data:

AS-BUILT CONTRACT RECORD DRAWING

Contractor's Name _____
 Contractor's Address _____
 Subcontractor's Name (where applicable) _____
 Subcontractor's Address _____
 Made by: _____ Date _____
 Checked by: _____ Date _____

Commissioner's Representatives
 (Resident Engineer) DDC
 (Plumbing Inspector) DDC
 (Heating & Ventilating Inspector) DDC
 (Electrical Inspector) DDC



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5. Record Drawing Title Sheet: The Contractor shall prepare a title sheet, the same size as the Contract Record Drawings, which shall contain the following:
 - a. Heading:
The City of New York
Department of Design and Construction
Division of Public Buildings
 - b. Capital Budget Project Number (FMS ID)
 - c. Name and Location of Project
 - d. Contractor's Name and Address
 - e. Subcontractor's Name and Address (where applicable)
 - f.. Record of changes (a caption description of work affected, and the date and number of Change Order or other authorization)
 - g.. List of Record Drawings
- B. Record Specifications, Addenda and Change Order: Submit to the Commissioner two (2) copies each of marked-up Record Specifications, Addenda and Change Orders.
- C. Record Product Data: Submit to the Commissioner two (2) sets of Record Product Data.
- D. Record Construction Photographs: Submit to the Commissioner final as-built construction photographs and negatives of the completed work as described in Section 01 32 33, PHOTOGRAPHIC DOCUMENTATION.
- E. Operating and Maintenance Manuals:
 1. Submit three (3) copies each of preliminary manuals to the Resident Engineer for review and approval. The Contractor shall make such corrections, changes and/or additions to the manual until deemed satisfactory by the Resident Engineer. Deliver three (3) copies of the final approved manuals to the Resident Engineer for distribution.
 2. Commissioning: Comply with the requirements of Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS, as well as the requirements set forth in sections of the Project Specifications, for projects designated for Commissioning. Submit four (4) copies each of data designated to be included in the Commissioning Operation and Maintenance Manual to the Resident Engineer. The Resident Engineer will forward such data to the Commissioning Authority/Agent (CxA) for review and comment. The Contractor shall make such corrections, changes and/or additions to the data until deemed satisfactory and deliver four (4) copies of the final data to the Resident Engineer for use by the Commissioning Authority/Agent (CxA) to prepare the Commissioning Operation and Maintenance Manual.
 - a. Non-Commissioning Data: All remaining data not designated for Commissioning and required as part of Maintenance and Operation Manual shall be prepared and assembled in accordance with the requirements of this section for Operating and Maintenance Manuals.
- F. Final Site Survey: Submit Final Site Survey as described in Section 01 73 00, EXECUTION, in quantities requested by the Commissioner, signed and sealed by a Land Surveyor licensed in the State of New York.
- G. Guarantees and Warranties.
- H. Waste Disposal Documents and Miscellaneous Record Documents.



PART II – PRODUCTS

2.1 CONTRACT RECORD DRAWINGS:

- A. Record Prints: The Contractor shall maintain one set of blue- or black-line white prints as applicable of the Contract Drawings and Shop Drawings. If applicable, the Record Contract Drawings and Shop Drawings shall incorporate the arrangement of the work based on the accepted Master Coordination Drawing(s) as described in Section 01 33 00, SUBMITTAL PROCEDURES.
1. Preparation: The Contractor shall mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Change Orders: All changes from Contract Drawings shall be distinctly encircled and identified by Change Order number correlating to changes listed on the "Title Sheet." The Contractor shall show within the encircled areas the work as actually installed.
- B. Content: Types of items requiring marking include, but are not limited to, the following:
- 1 Dimensional changes to Drawings.
 - 2 Revisions to details shown on Drawings.
 - 3 Depths of foundations below first floor.
 - 4 Locations and depths of underground utilities.
 - 5 Revisions to routing of piping and conduits.
 - 6 Revisions to electrical circuitry.
 - 7 Actual equipment locations.
 - 8 Duct size and routing.
 - 9 Locations of concealed internal utilities.
 - 10 Changes made by Change Order
 - 11 Changes made following Commissioner's written orders.
 - 12 Details not on the original Contract Drawings.
 - 13 Field records for variable and concealed conditions.
 - 14 Record information on the Work that is shown only schematically.
- C. Progress Record Mylar's (reproducible): As directed by the Resident Engineer at 50% construction completion, review marked-up Record Prints with the Resident Engineer and the Design Consultant. When directed by the Resident Engineer transfer progress mark-ups to a full set of Mylar's (reproducible) and submit one blue line or black line record copy to the Resident Engineer. The marked-up Mylar's (reproducible) shall be retained by the contractor for completion of mark-up and final submission.
- D. Final Contract Record Mylar's (reproducible): Immediately before final inspection for Certificate of Substantial Completion, review marked-up Record Prints with the Resident Engineer and the Design Consultant. When authorized, complete mark-up of a full set of corrected Mylar's (reproducible) of the Contract Drawings.
1. Incorporate changes and additional information previously marked on Record Prints. Erase, redraw, and add details and notations where applicable.
 2. Refer instances of uncertainty to Resident Engineer for resolution.
 3. Print the As-Built Contract Drawings and Shop Drawings for use as Record Transparencies as described in Sub-Section 1.5.

2.2 RECORD SPECIFICATIONS, ADDENDA AND CHANGE ORDERS:

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made
 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 5. Note related Change Orders and Record Drawings where applicable.
 6. Upon completion of mark-up, submit two (2) complete copies of the marked-up Record Specifications to the Commissioner.

2.3 RECORD PRODUCT DATA:

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. If possible, a Change Order proposal should include resubmitting updated Product Data. This eliminates the need to mark up the previous submittal.
 4. Note related Change Orders and Record Drawings where applicable.
 5. Upon completion of mark-up submit to the Commissioner two (2) sets of the marked-up Record Product Data.
 6. Where Record Product Data is required as part of Maintenance Manuals, submit marked-up Product Data as an insert in the manual instead of submittal as record Product Data.

2.4 RECORD SAMPLE SUBMITTAL:

- A. Prior to the date of Substantial Completion, the Contractor shall meet with the Resident Engineer at the site to determine which of the Samples maintained during the construction period shall be transmitted to the Commissioner for record purposes.
- B. Comply with the Resident Engineer's instructions for packaging, identification marking and delivery to DDC. Dispose of other samples as specified for disposal of surplus and waste material.

2.5 OPERATING AND MAINTENANCE MANUALS:

- A. The Contractor shall provide preliminary and final versions of Operating and Maintenance Manuals required for those systems, equipment and materials listed in other Sections of the Project Specifications.
- B. Format: Prepare and assemble Operation and Maintenance Manuals in heavy-duty, 3-ring, hardback loose leaf binders in the form of an instructional manual. All binders for each discipline shall be the same color. When multiple binders are used, correlate data into related consistent groupings. Binder front shall contain permanently attached labels displaying the following:



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1. Heading:
The City of New York
Department of Design and Construction
Division of Public Buildings
 2. Capital Budget Project Number (FMS ID)
 3. Name and Location of Project
 4. Contractor's Name and Address
 5. Subcontractor's Name and Address (where applicable)
 6. Dates of the work covered by the contents of the Project Manual.
 7. Binder spine shall display Project Number (FMS ID) and date of completion.
- C. Organization: Include a section in the directory for each of the following:
1. List of documents
 2. List of systems
 3. List of equipment
 4. Table of contents
- D. Arrange content by systems under Specification Section numbers and sequence of Table of Contents of the Project manual. Provide tabbed flyleaf for each separate product, equipment and/or system/subsystem with typed description of product and major component parts of equipment.
- E. Safety warnings or cautions shall be visibly highlighted within each maintenance procedure. Use of such highlights shall be limited to only critical items and shall not be used in an excessive manner which would reduce their effectiveness.
- F. For each product or system, list names, addresses and telephone numbers of Subcontractors and Suppliers, including local source of supplies and replacement parts. Vendors and Supplier listings are to include names, addresses and telephone numbers, including nearest field service telephone numbers.
- G. Where contents of the manual include any manufacturer's catalog pages, clearly indicate the precise items and options included in the installation and delete all manufacturers' data regarding products not included in the installation.
- H. All material within manuals shall be new. Copies used for prior submittals or used in construction shall not be used.
- I. Submit preliminary and final manual editions to the Commissioner according to the approved progress schedule.
- J. Manuals shall present all technical material to the greatest extent possible, with respect to text, tabular matter and illustrations. Illustrations shall preferably consist of line drawings. All applicable drawings shall be included. If available, color photograph prints may be included.
- K. Preliminary manual editions shall be as technically complete as the final manual edition. All illustrations shall be in final forms.
- L. Final manual editions shall be technically accurate and complete and shall represent all "as-built" systems, pieces of equipment, or materials, which have been accepted by the Commissioner. All illustrations, text and tabular material shall be in final form. All shop drawings shall be included as specified in individual Specification Sections.
- M. Building products, applied materials, and finishes: Include product data, with catalog number, size, composition, and color texture designations. Where applicable, provide information for re-ordering custom manufactured products.
- N. Instructions for care and maintenance: Include manufacturers' recommendations for cleaning agents and methods, and recommended schedule for cleaning and maintenance.



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- O. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical compositions, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- P. Additional Requirements: Specified in individual Specification Sections.

2.6 DEMONSTRATION AND ORIENTATION DVD:

- A. Non-Commissioned Projects: The Contractor shall submit final version of applicable Demonstration and Orientation DVD recordings in compliance with Section 01 79 00, DEMONSTRATION AND OWNER'S PRE-ACCEPTANCE ORIENTATION.

2.7 GUARANTEES AND WARRANTIES:

- A. SCHEDULE B – Requirements for guarantees and warranties for the Project are set forth in Schedule B, which is included as part of the Addendum.
- B. FORM – For all guarantee requirements set forth in Schedule B, the Contractor shall provide a written guaranty, in the form set forth herein.
- C. Submit fully executed and signed manufacturers' Warranties as listed in the Project Specifications and outlined in Schedule B of the Addendum. Refer to Section 01 77 00, CLOSEOUT PROCEDURES for submittal requirements.



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GUARANTY

DDC PROJECT # _____

PROJECT DESCRIPTION _____

CONTRACT # _____

SPECIFICATION SECTION # AND TITLE _____

GUARANTY TO BE IN EFFECT FROM _____

TO _____

The Contractor hereby guarantees that the work specified under the above section of the aforesaid Contract will be free from defects of material and/or workmanship, for the period indicated above.

The Contractor also guarantees that it will promptly repair, restore, rebuild or replace whichever may be deemed necessary by the City, any or all defective material or workmanship of the aforementioned section, that may appear within the guaranty period and any finished work to which damage may occur because of such defects, to the satisfaction of the City and without any cost or expense to the City.

The Contractor hereby agrees to pay to the City the cost of the repairs or replacements should the City make the same because of the failure of the Contractor to do so.

Contractor: _____

By: _____
Signature of Partner or Corporate Officer

Print Name: _____

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

Notary Public



2.8 WASTE DISPOSAL DOCUMENTATION:

- A. Certify and deliver to the Commissioner all documentation including reports, receipts, certificates, records etc. for the collection, handling, storage, classification, testing, transportation, recycling and/or disposal of all Non-Hazardous Construction Waste as required by Section 01 74 19, CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL, and Hazardous Waste as required by other Project Specification Sections. Certify compliance with all applicable governing laws, codes, rules and regulations.

2.9 MISCELLANEOUS RECORD DOCUMENTS:

- A. Refer to other Project Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Prior to Final Acceptance, complete miscellaneous records and place in good order, properly identified and bound or otherwise organized to allow for use and reference.
- B. Submit three (3) copies of each document to the Commissioner or as otherwise directed by the Commissioner.

PART III – EXECUTION

3.1 RECORDING AND MAINTENANCE:

- A. Recording: Maintain one copy of each submittal during the construction period for Contract Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Contract Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to the Contract Record Documents for the Resident Engineer's reference during normal working hours.

END OF SECTION 01 79 39



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No Text

CONTRACT RECORD DOCUMENTS
01 78 39- 10



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**SECTION 01 79 00
DEMONSTRATION AND OWNER'S PRE-ACCEPTANCE ORIENTATION**

REFER TO THE ADDENDUM FOR APPLICABILITY OF THIS SECTION 01 79 00

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes administrative and procedural requirements, when set forth in sections of the Project Specifications, for instructing facility's personnel, including the following:
1. Demonstration of operation of systems, subsystems, and equipment.
 2. Owner's Pre-Acceptance Orientation in operation and maintenance of systems, subsystems, and equipment.
 3. Demonstration and Orientation videotapes. (Non-Commissioned Projects)
- B. The Contractor shall provide the services of equipment manufacturers orientation specialists experienced in the type of equipment to be demonstrated.
- C. Separate Orientation sessions shall be conducted for mechanical operations and maintenance personnel and for electronic and electrical maintenance personnel.
- D. Commissioning: Refer to the Addendum to identify whether this project is to be Commissioned. For Commissioned projects the Contractor shall provide Demonstration and Orientation as described in this section and cooperate with the Commissioning Authority/Agent (CxA) to implement Commissioning requirements as described in Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS.

1.3 RELATED SECTIONS: include without limitation the following:

- A. Section 01 10 00 SUMMARY
- B. Section 01 33 00 SUBMITTAL PROCEDURES
- C. Section 01 77 00 CLOSEOUT PROCEDURES
- D. Section 01 78 39 CONTRACT RECORD DOCUMENTS
- E. Section 01 91 13 GENERAL COMMISSIONING REQUIREMENTS
- F. Specific requirements for demonstration and orientation indicated in other sections of the Project Specifications

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.



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- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.

1.5 SUBMITTALS:

- A. Instruction Program: Submit three (3) copies of outline of instructional program for demonstration and orientation, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each orientation module to the Commissioner for approval no less than thirty (30) days prior to the date the proposed orientation is to take place. Include learning objectives and outline for each orientation module.
1. At completion of orientation, submit three (3) complete orientation manual(s) and three (3) applicable DVD recording(s) to the Commissioner for the facility's and City's use.
- B. Qualification Data: For facilitator, instructor and Videographer.
- C. Attendance Record: For each orientation module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each orientation module, submit results and documentation of performance-based test.
- E. Submit all final orientation material to the Resident Engineer a minimum of fourteen (14) days prior to the scheduled orientation.
- F. Demonstration and Orientation Recordings:
1. Non-Commissioned Projects:
- a. The Contractor shall submit to the Commissioner three (3) copies of Demonstration and Orientation DVD (Digital Video Disk) recordings within seven (7) days of end of each orientation module.
- b. Identification: On each copy, provide an applied label with the following information:
- 1) Project Contract I.D. Number
 - 2) Project Contract Name
 - 3) Name of Contractor
 - 4) Name of Subcontractor as applicable
 - 5) Name of Design Consultant
 - 6) Name of Construction Manager as applicable
 - 7) Date recorded.
 - 8) Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
 - 9) Table of Contents including list of systems covered.
- c. Transcript: Prepared on 8-1/2-by-11-inch paper, hole-punched and bound in heavy-duty, 3-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding DVD recording. Include name of Project and date of recording on each page.
2. Commissioned Projects:
- a. Demonstration and Orientation DVD recordings for Commissioned projects will be recorded by the Commissioning Authority/Agent (CxA) under separate contract with the City of New



York. The Contractor performing Demonstration and Orientation shall cooperate with the CxA in the recording of each Demonstration and Orientation module.

1.6 QUALITY ASSURANCE:

- A. Facilitator Qualifications: A firm or individual experienced in orientation or educating maintenance personnel in an orientation program similar in content and extent to that indicated for this Project.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 01 40 00, QUALITY REQUIREMENTS, experienced in operation and maintenance procedures and orientation.
- C. Videographer Qualifications: A professional Videographer who has experience with orientation and construction projects.
- D. Pre-instruction Conference: Schedule with the Resident Engineer a conference at Project site to comply with requirements in Section 01 31 00, PROJECT MANAGEMENT AND COORDINATION. Review methods and procedures related to demonstration and orientation including, but not limited to, the following:
 - 1. Inspect and discuss locations and other facilities required for instruction.
 - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 - 3. Review required content of instruction.
 - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.7 COORDINATION:

- A. Coordinate instruction schedule with the Resident Engineer and facility's operations. Adjust schedule as required to minimize disrupting facility's operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of orientation modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by the Commissioner.

PART II – PRODUCTS

2.1 INSTRUCTION PROGRAM:

- A. Program Structure: Develop an instruction program that includes individual orientation modules for each system and equipment not part of a system, as specified and required by individual Specification Sections.
- B. Orientation Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.



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- d. Regulatory requirements.
 - e. Equipment function including auxiliary equipment and systems.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project Record Documents.
 - e. Identification systems.
 - f. Warranties
 3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
 4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
 5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
 6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
 7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning



- e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
 - h. Housekeeping practices
8. Repairs: Include the following:
- a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART III – EXECUTION

3.1 INSTRUCTION:

- A. **Facilitator:** Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and the Resident Engineer for the number of participants, instruction times, and location.
- B. The Contractor shall engage qualified instructors to instruct facility's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
- C. **Scheduling:** Schedule instruction with the Resident Engineer at mutually agreed times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule orientation with the Resident Engineer with at least fourteen (14) days' advance notice.
- D. **Evaluation:** At conclusion of each orientation module, assess and document each participant's mastery of module(s) by use of an oral a written or a demonstration performance-based test.
- E. **Cleanup:** Collect and remove used and leftover educational materials from project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial orientation use.

**REFER TO THE ADDENDUM FOR THE APPLICABILITY OF SUB-SECTION 3.2.A or
SUB-SECTION 3.2.B**

3.2 DEMONSTRATION AND ORIENTATION RECORDINGS:

- A. **Non-Commissioned projects:**
 - 1. The Contractor shall engage a qualified commercial Videographer to record demonstration and orientation sessions. Record each orientation module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
 - 2. At beginning of each orientation module, record each chart containing learning objective and lesson outline.
 - 3. All recordings must be close captioned.
 - 4. **Recording Format:** Provide high-quality DVD (Digital Video Disk) format.



5. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of demonstration and orientation. Display continuous running time.
6. Narration: Describe scenes on the recording by audio narration by microphone while recording or by dubbing audio narration off-site after. Include description of items being viewed. Describe vantage point, indicating location, direction (by compass point), and elevation or story of construction.
7. Transcript: Provide a typewritten transcript of the narration. Display images and running time captured from opposite the corresponding narration segment.

B. Commissioned Projects:

1. The Commissioning Authority/Agent (CxA) under separate contract with the City of New York will be responsible for DVD recording of Demonstration and Orientation sessions as described in Section 01 91 13, GENERAL COMMISSIONING REQUIREMENTS.

END OF SECTION 01 79 00



**SECTION 01 81 13
SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS**

REFER TO THE ADDENDUM FOR APPLICABILITY OF THIS SECTION 01 81 13

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

A. LEED BUILDING - GENERAL REQUIREMENTS:

The City of New York is committed to implementing good environmental practices and procedures which include achieving a LEED™ Green Building rating. Specific project requirements related to this goal are listed in the applicable paragraphs of this section of the General Conditions. The Contractor shall ensure that these requirements as defined in the sections below and in related sections of the Contract Documents, are implemented to the fullest extent. Substitutions, or other changes to the work proposed by the Contractor or their Subcontractors, shall not be allowed if such changes compromise the stated LEED BUILDING criteria.

B. This Section includes:

1. Definitions
2. LEED Provisions
3. LEED Building Submittals
4. LEED Building Submittal Requirements
5. LEED Action Plan

1.3 RELATED SECTIONS: Include without limitation the following:

- | | | |
|----|---------------------|--|
| A. | Section 01 74 19 | CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL |
| B. | Section 01 81 13.13 | VOLATILE ORGANIC COMPOUND (VOC) LIMITS FOR ADHESIVES,
SEALANTS, PAINTS AND COATINGS |
| C. | Section 01 81 19 | INDOOR AIR QUALITY REQUIREMENTS FOR LEED BUILDINGS |
| D. | Section 01 91 13 | GENERAL COMMISSIONING REQUIREMENTS |

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Agrifiber Products: Products derived from recovered agricultural waste fiber from sources such as cereal straw, sugarcane bagasse, sunflower husk, walnut shells, coconut husks, and agricultural prunings, processed and mixed with resins to produce panels with characteristics similar to composite wood.



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- C. Composite Wood: Products composed of wood or plant particles or fibers bonded by a synthetic resin or binder to produce panels such as plywood, particleboard, and medium density fiberboard (MDF). Does not include hardboard, structural panels, glued laminated timber, prefabricated wood I-joists, or finger-jointed lumber.
- D. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- E. Forest Stewardship Council (FSC) Certified Wood: Wood-based materials and products certified in accordance with the Forest Stewardship Council's principles and criteria.
- F. LEED: The Leadership in Energy & Environmental Design rating system developed by the United States Green Building Council.
- G. Rapidly Renewable Materials: Materials made from agricultural products that are typically harvested within a ten-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.
- H. Regionally Manufactured Materials: Materials that are manufactured within a radius of 500 miles from the Project location. Manufacturing refers to the final assembly of components into the building product that is installed at the Project site.
- I. Regionally Extracted, Harvested, or Recovered Materials: Materials which are extracted, harvested, or recovered and manufactured within a radius of 500 miles from the Project site.
- J. Recycled Content: The percentage by weight of constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).
 - 1. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product are not recycled materials.
 - 2. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process except mechanical and electrical components are pre-consumer recycled materials.
 - 3. "Pre-consumer" may also be referred to as "post-industrial".
- K. Solar Reflectance Index (SRI): A measure of a material's ability to reflect solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is equal to 0, and a standard white (reflectance 0.80, emittance of 0.90) is equal to 100.
- L. Volatile Organic Compound (VOC): Any compound of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) which vaporizes (becomes a gas) and participates in atmospheric photochemical reactions, as specified in Part 51.00 of Chapter 40 of the U.S. Code of Federal Regulations, at normal room temperatures. For the purposes of this specification, formaldehyde and acetaldehyde are considered to be VOCs.



1.5 LEED PROVISIONS:

- A. Refer to the Addendum for the LEED rating to be achieved for this project. The provisions to achieve this LEED rating are integrated within the project construction documents and specifications. The Contractor is specifically directed to the "LEED BUILDING Performance Criteria" and "LEED BUILDING Submittals" sections within the contract specification. Additional LEED requirements are met through aspects of the project design, including material and equipment selections, which may not be specifically identified as LEED BUILDING requirements. Compliance with the requirements needed to obtain LEED prerequisites and credits will be used as one criterion to evaluate substitution requests.

1.6 LEED BUILDING SUBMITTALS:

- A. Scope: LEED BUILDING submittals are required for all installed materials included in General Construction work. LEED BUILDING Submittals are only required for field-applied adhesives, sealants, paints and coatings included in Plumbing, Mechanical and Electrical work. Submit all required LEED BUILDING submittals in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
- B. Applicability: The extent of the LEED BUILDING Submittals varies depending on the specification section. Applicable LEED BUILDING Submittals are listed under the "LEED BUILDING Submittals" heading in each specification section. The detailed requirements for the LEED BUILDING Submittals are defined in Item C below.
- C. Detailed Requirements: Sub-Sections 1.6 C.1 through 1.6 C.3 below defines the information and documents to be provided for each type of LEED BUILDING Submittal as identified in the LEED Submittal Requirements of each specification section:
1. ENVIRONMENTAL BUILDING MATERIALS CERTIFICATION FORM (EBMCF)[GHI]: Information to be supplied for this form (blank sample copy attached at end of this Section to be modified as appropriate to the project) shall include some or all of the following items, as identified in the LEED Submittal Requirements of each specification section:
 - a. Cost breakdowns for the materials included in the contractor or sub-contractor's scope of work. Cost reporting shall include itemized material costs (excluding the contractor's labor, equipment, overhead and profit).
 - b. The percentages (by weight) of post-consumer and/or post-industrial recycled content in the supplied product(s).
 1. For each product with recycled content, also indicate the total recycled content value ($1/2 \times \text{pre-consumer percentage} \times \text{product value} + 1 \times \text{post-consumer percentage} \times \text{product value} = \text{total recycled content value}$).
 2. See additional requirements for concrete below.
 - c. Identification (Yes/No) of materials manufactured within 500 miles of the project site AND containing raw materials harvested or extracted within 500 miles of the project site.
 - 1) Indicate the percentage by weight, relative to the total weight of the product that meets these criteria.
 - 2) Indicate the point of harvest/extraction/recovery of regional raw materials, the point of final assembly of regional manufactured products, and the distance from each point to the project site.
 - d. Volatile Organic Compound (VOC) content of all field-applied adhesives, sealants, paints, and coatings, listed in grams/liter or lbs./gallon, less water.
 - 1) For detailed requirements refer to Section 01 81 13.13 VOC LIMITS FOR ADHESIVES, SEALANTS, PAINTS AND COATINGS.
 - e. The amount of "Forest Stewardship Council (FSC) Certified" wood products if used in the Project.
 - 1) Record only new FSC-certified wood products. Do not record reclaimed, salvaged, or recycled FSC-certified wood products.



- 2) Reclaimed, salvaged, or recycled FSC-certified wood may be recorded as post-consumer recycled content.
 - f. The amount of Rapidly Renewable materials if used in the Project.
 - 1) Indicate the type of rapidly renewable material used, and the percentage by weight, relative to the total weight of the product, that consists of rapidly renewable material.
 - g. The percentage (by weight), relative to the total weight of cementitious materials, of supplementary cementitious materials or pozzolans such as fly ash used in each concrete mix used in the Project.
 - 1) For each concrete mix, provide a complete breakdown of all components, by weight and by cost.
 - h. Identification (Yes/No) of composite wood or agrifiber products used in the project that are free of added urea-added formaldehyde resins.
 - i. Identification (Yes/No) of flooring products used in the project that have Carpet and Rug Institute (CRI) Green Label or Green Label Plus certification, or Resilient Floor Covering Institute FloorScore certification.
 - 1) Untreated solid wood flooring, and mineral-based flooring products such as tile, masonry, terrazzo, and cut stone that have no organic-based coatings or sealants, are excluded from this requirement.
 - j. The EBMCF shall record the above information only for those materials or products permanently installed in the project. The EBMCF shall record VOC content, composite and agrifiber products, and CRI or FloorScore ratings only for those materials or products permanently installed within the weather barrier of the LEED building.
2. **EBMCF BACK-UP DOCUMENTATION:** These documents are used to validate the information provided on the EBMCF (except cost data). For each material listed on the EBMCF, provide documentation to certify the material's LEED BUILDING attributes, as applicable:
- a. **RECYCLED CONTENT:** Provide published product literature or letter of certification on the manufacturer's letterhead certifying the amounts of post-consumer and/or post-industrial content.
 - b. **REGIONAL MANUFACTURING AND REGIONAL RAW MATERIALS (WITHIN 500 MILES):** Provide published product literature or letter of certification on the manufacturer's letterhead indicating the city/state where the manufacturing plant is located, where each of the raw materials in the product were extracted, harvested or recovered and the distance in miles from the project site.
 - 1) If only some of the raw materials for a particular product or assembly originate within 500 miles of the project site, provide the percentage (by weight) that these materials comprise in the complete product.
 - c. **VOC CONTENT:** Provide Material Safety Data Sheets (MSDS) certifying the Volatile Organic Compound (VOC) content of the adhesive, sealant, paint, or coating products. VOC content is to be reported in grams/liter or lbs./gallon, less water. If the MSDS does not show the product's VOC content, this information must be provided through other published product literature from the manufacturer, or stated in a letter of certification from the product manufacturer on the manufacturer's letterhead.
 - d. **RAPIDLY RENEWABLE MATERIALS:** If used in the project, provide published literature or letter of certification on the manufacturer's letterhead certifying the percentage of each product that is rapidly renewable (by weight).
3. **PRODUCT CUT SHEETS:** Provide product cut sheets with the Contractor's or sub-contractor's stamp, confirming that the submitted products are the products installed in the Project.
4. **CRI GREEN LABEL PLUS CERTIFICATION:** For carpets and carpet cushions, provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying that the products comply with the "Green Label Plus" IAQ testing program of the Carpet and Rug Institute of Dalton, GA.



5. **CERTIFICATION OF COMPOSITE WOOD OR AGRIFIBER RESINS:** For all composite wood, engineered wood and agrifiber products (including plywood, particleboard, and medium density fiberboard), provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying that the products do not contain added urea-formaldehyde resins.
6. **CERTIFICATION OF COMPOSITE WOOD OR AGRIFIBER LAMINATING ADHESIVES:** For all laminating adhesives used with composite wood, engineered wood and agrifiber products (e.g., adhesives used to laminate wood veneers to an engineered wood substrate), provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying that the adhesive products do not contain urea-formaldehyde.
7. **FSC-CERTIFIED WOOD:**
 - a. If used in the project, provide chain of custody documents and copies of invoices regarding wood products, including whether or not such wood product is FSC-certified.
 - b. If used in the project, for assemblies, provide the percentage (by cost and by weight) of the assembly that is FSC-certified wood.
 - c. If used in the project, for assemblies, provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying the percentage that is FSC-certified wood.
8. **GREEN SEAL COMPLIANCE:** Provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying that the following product types comply with the VOC limits and chemical component restrictions developed by the Green Seal organization of Washington, DC:
 - a. Interior Architectural Paints and Coatings: refer to Green Seal standard GS-11 (1st edition, May 1993)
 - b. Anti-corrosive and Anti-rust paints: refer to Green Seal standard GC-03 (2nd Edition, January 1997)
 - c. Aerosol Adhesives: refer to Green Seal standard GS-36 (1st edition, October 2000)
9. **HIGH ALBEDO PAVING AND WALKWAY MATERIALS:** For paving and walkway materials made from concrete or brick provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying a minimum Solar Reflectance Index (SRI) value of 29. SRI values shall be calculated according to ASTM E 1980. Reflectance shall be measured according to ASTM E 903, ASTM E 1918, or ASTM C 1549. Emittance shall be measured according to ASTM E 408 or ASTM C 1371.
10. **HIGH ALBEDO ROOFING MATERIALS:** For exposed roofing membranes, pavers, and ballast products, provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying the following minimum Solar Reflectance Index (SRI) values:
 - a. 78 for low-sloped roofing applications (slope \leq 2:12)
 - b. 29 for steep-sloped roofing applications (slope $>$ 2:12)SRI values shall be calculated according to ASTM E 1980. Reflectance shall be measured according to ASTM E 903, ASTM E 1918, or ASTM C 1549. Emittance shall be measured according to ASTM E 408 or ASTM C 1371. Vegetated roof surfaces are exempt from the SRI criteria.
11. **LOW MERCURY LAMPS:** For all fluorescent, compact fluorescent, and HID lamps installed in the project, provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying:
 - a. The mercury content or content range per lamp in milligrams or picograms;
 - b. The design light output per lamp (light at 40% of a lamp's useful life) in lumens; and
 - c. The rated average life of the lamp in hours.



In addition, provide the total number of each lamp type installed in the project.

12. **FLOORSCORE CERTIFICATION:** For all hard surface flooring, including vinyl, linoleum, laminate flooring, wood flooring, ceramic flooring, rubber flooring, and wall base, provide published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying that the products comply with the current FloorScore standard requirements.
13. **CONCRETE:** Provide concrete mix design for each mix, designated by a distinct identifying code or number and signed by a Professional Engineer licensed in the state in which the concrete manufacturer or supplier is located.
14. **INTERIOR LIGHTING FIXTURES:** For each lighting fixture type installed within the building's weather barrier, provide manufacturer's cut sheets indicating the following:
 - a. Fixture power in watts.
 - b. Initial lamp lumens.
 - c. Photometric distribution data.
 - d. Dimming capability, in range of percentages.
15. **EXTERIOR LIGHTING FIXTURES:** For each lighting fixture type installed on site, provide manufacturer's cut sheets indicating the following:
 - a. Fixture power in watts.
 - b. Initial lamp lumens.
 - c. Photometric distribution data.
 - d. Range of field adjustability, if any.
 - e. Warranty of suitability for exterior use.
16. **ALTERNATIVE TRANSPORTATION:** Provide manufacturer's cut sheets and/or shop drawings for the following items installed on site:
 - a. Bike racks, including total number of bicycle slots provided.
 - b. Signage indicating parking spaces reserved for electric or low-emitting vehicles and for carpools/vanpools, including total number of signs.
17. **WATER CONSERVING FIXTURES:** For all water consuming plumbing fixtures and fittings, provide manufacturer's cut sheets showing maximum flow rates and/or flush rates.
18. **ENERGY SAVING APPLIANCES:** Provide manufacturer's cut sheets and published product literature or letter from the manufacturer (on the manufacturer's letterhead) verifying the product's rating under the U.S. EPA/DOE Energy Star program, for all of the following:
 - a. Appliances (i.e., refrigerators, dishwashers, microwave ovens, televisions, clothes washers, clothes dryers, chilled water dispensers).
 - b. Office equipment (i.e., copy machines, fax machines, plotters/printers, scanners, binding and publishing equipment).
 - c. Electronics (i.e., servers, desktop computers, computer monitor displays, laptop computers, network equipment).
 - d. Commercial food service equipment
19. **GLAZING:** For glazing in any windows, doors, storefront and window wall systems, curtainwall systems, skylights, and partitions, provide manufacturer's cut sheets indicating the following:
 - a. Glazed area.
 - b. Visible light transmittance.
 - c. Solar heat gain coefficient.
 - d. Fenestration assembly u-factor.
20. **VENTILATION:** Provide manufacturer's cut sheets for the following:
 - a. Carbon dioxide monitoring systems, if any, installed to measure outside air delivery.
 - b. Air filters: for detailed requirements refer to Section 01 81 19 INDOOR AIR QUALITY REQUIREMENTS.
21. **REFRIGERATION:** For all refrigeration equipment, provide manufacturer's cut sheets indicating the following:
 - a. Equipment type.



- b. Equipment life. Default values specified by the 2007 ASHRAE Applications Handbook will be used unless otherwise demonstrated by the manufacturer's guarantee and an equivalent long-term service contract.
- c. Refrigerant type.
- d. Refrigerant charge in pounds of refrigerant per ton of gross cooling capacity.
- e. Tested refrigerant leakage rate, in percent per year. A default rate of 2% will be used unless otherwise demonstrated by test data.
- f. Tested end-of-life refrigerant loss, in percent. A default rate of 10% will be used unless otherwise demonstrated by test data.

1.7 LEED BUILDING SUBMITTAL REQUIREMENTS:

- A. The LEED BUILDING submittal information shall be assembled into one package per contract specification section(s) (or per subcontractor), and submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. Incomplete or inaccurate LEED BUILDING submittals may be used as the basis for rejecting the submittals of products or assemblies.

1.8 LEED ACTION PLANS:

- A. Construction Waste Management Plan- Refer to Section 01 74 19, Construction Waste Management and Disposal for detailed submittal requirements.
- B. Construction IAQ Management Plan- Refer to Section 01 81 19, Indoor Air Quality Requirements for LEED Buildings, for detailed submittal requirements.
- C. Erosion and Sedimentation Control Plan:
 - 1. The Plan shall be in accordance with the New York Department of Environmental Conservation (NYSDEC) or the 2003 EPA Construction General Permit, whichever is more stringent.
 - 2. The Plan shall be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
 - 3. Detailed requirements: ESC Plan
 - a. Include the Stormwater Pollution Prevention Plan, if required.
 - b. Identify the party responsible for Plan monitoring and documentation. The party must be regularly on site.
 - c. Describe all site work that will be implemented on the project.
 - d. Provide site plan with location of ESC measures, including, but not limited to, stormwater quantity controls, stormwater quality controls, stabilized construction entrances, washdown areas, and inlet/catch basin protection.
 - e. Describe the inspection and maintenance of the ESC measures. Provide a construction schedule indicating weekly site review.
 - f. Describe reporting and documentation measures.
 - 4. Detailed requirements: ESC Measures
 - 5. Submittal requirements: ESC Tracking Log
 - a. Note date of major rain events, describe damage, describe any repairs or maintenance performed, and note responsible party.
 - b. Note date and findings of weekly site review, describe any repairs or maintenance performed, and note responsible party.
 - c. Submit monthly.
 - 6. Implementation
 - a. The Contractor shall implement the ESC Plan, coordinate the Plan with all affected trades, and designate one individual as the Erosion and Sedimentation Control Representative, who will be responsible for communicating the progress of the Plan with the Commissioner on a regular basis, and for assembling the required LEED documentation.



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- b. The Contractor shall be responsible for the provision, maintenance, and repair of all ESC measures.
- c. Demonstration. The Contractor shall provide on-site instruction of proper construction practices required to prevent erosion and sedimentation.
- d. Meetings. Urgent or ongoing ESC issues shall be discussed at weekly on-site job meetings.

1.9 QUALITY ASSURANCE:

- A. The Contractor shall implement all LEED Action Plans, coordinate the Plans and LEED Building Submittals with all affected trades, and designate one individual as the Sustainable Construction Representative at no additional cost to the City of New York, who will be responsible for communicating the progress of LEED activities with the Commissioner on a regular basis, and for assembling the required LEED documentation.
- B. Responsibilities of Contractor's Subcontractors: The Contractor shall be responsible for his/her subcontractors complying with the LEED Action Plans and for providing required LEED documentation as required for the project.
- C. Distribution and Compilation: The Contractor shall be responsible for distributing the EBMCF and any other forms or templates required for the subcontractors to record LEED documentation. The Contractor shall also be responsible for collecting and compiling EBMCF information into packages as described in Section 01 33 00 SUBMITTAL PROCEDURES.
- D. Meetings: Sustainable design and construction issues shall be discussed at the following meetings:
 1. Demolition kick-off meeting
 2. Construction kick-off meeting
 3. Construction kick-off meeting for LEED (independent meeting)
 4. Weekly job-site progress and coordination meetings
 5. Closeout meeting

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 81 13



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ENVIRONMENTAL BUILDING MATERIALS CERTIFICATION FORM

Contractor Name: _____ Date: _____
 Contractor Contact: _____ Project Name: _____
 Telephone Number: _____ Project I.D.: _____
 Project Location: _____

Product/Manufacturer	Material Cost ¹	Recycled Content		Regional ⁴		Rapidly Renewable ⁷ Material % by wt	VOC content ⁸		Flooring ⁹ *Green Label or FloorScore	Wood *Added urea formaldehyde (Yes/No) ¹⁰	FSC Certified ¹¹ (% by wt)	
		Pre-Consumer (% by wt) ²	Post-Consumer (% by wt) ³	Total % (1/2 Pre + Post)	Location & Distance to Extraction ⁵		Location & Distance to Manufacture ⁶	*VOC content listed				*VOC content allowed

¹ **Material Cost:** As it appears on the manufacturer's or distributor's invoice to the contractor or subcontractor. Does not include labor or equipment costs associated with installation.

² **Pre-Consumer Recycled Content:** Industrial/manufacturing waste material (e.g., fly-ash and synthetic gypsum, both waste products from coal burning electricity plants) diverted from landfill and incorporated into a finished product. Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-Consumer Recycled Content.

³ **Post-Consumer Recycled Content:** Material or product that has served its intended consumer use (e.g., an empty plastic bottle) and has been diverted from landfill and incorporated into a finished product.

⁴ **Regional:** Refers to a material/product that is BOTH extracted AND manufactured within 500 miles of the Project site. Record this information ONLY for materials/products meeting BOTH of these criteria.

⁵ **Extraction:** Refers to the location from which the raw resources used in a building product are extracted, harvested, or recovered.

⁶ **Manufacture:** Refers to the location of the final assembly of components into a building product that is furnished and installed by the Contractor.

⁷ **Rapidly Renewable:** Refers to materials/products derived from agricultural products that are typically harvested within a ten-year or shorter cycle.

⁸ **VOC Content:** The quantity of volatile organic compounds contained in adhesives, sealants, paints and architectural coatings. Reported in grams/liter or lbs/gallon, less water.

⁹ **Flooring:** For carpet, indicate Carpet and Rug Institute (CRI) Green Label Plus certification. For carpet cushion, indicate CRI Green Label certification. For all flooring except unfinished/un-treated wood and mineral-based flooring (tile, masonry, terrazzo, cut stone) without organic-based coatings or sealants, indicate Resilient Floor Covering Institute FloorScore rating. VOC limits for adhesives, sealants, etc. still apply.

¹⁰ **Added Urea Formaldehyde:** Applies to composite wood and agrifiber products only (plywood, particleboard, MDF, OSB, wheatboard, strawboard). Resins or binders with added urea formaldehyde are prohibited.

¹¹ **FSC Certified:** Certification from the Forest Stewardship Council. This column is only applicable to wood products.

* Applies only to materials/products installed within the weather barrier.

Contractor Certification: _____
 I, _____ a duly authorized representative of _____ (the Contractor) hereby certify that the material information contained herein is an accurate representation of the material qualifications to be provided by the Contractor as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Commissioner.
 Signature of Authorized Representative: _____ Date: _____

No Text



SECTION 01 81 13.13
VOLATILE ORGANIC COMPOUND (VOC) LIMITS FOR ADHESIVES, SEALANTS, PAINTS AND COATINGS FOR LEED BUILDINGS

REFER TO THE ADDENDUM FOR APPLICABILITY OF THIS SECTION 01 81 13.13

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 SUMMARY:

- A. This Section includes requirements for volatile organic compound (VOC) content in adhesives, sealants, paints and coatings used for the project.
- B. All sections in the Project Specifications with adhesives, sealant or sealant primer applications, paints and coatings shall follow all requirements of this section. In the event of any conflict or inconsistency between this section and the Specifications regarding adhesives, sealant or sealant applications, paints and coatings, the requirements set forth in this Section shall prevail.
- C. This Section includes:
1. General Requirements
 2. References
 3. VOC Requirements for Interior Adhesives
 4. VOC Requirements for Interior Sealants
 5. VOC requirements for Interior Paints
 6. VOC requirements for Interior Coatings
 7. Submittals

1.3 RELATED SECTIONS: Include without limitation the following:

- | | | |
|----|------------------|---------------------------------------|
| A. | Section 01 10 00 | SUMMARY |
| B. | Section 01 31 00 | PROJECT MANAGEMENT AND COORDINATION |
| C. | Section 01 32 00 | CONSTRUCTION PROGRESS DOCUMENTATION |
| D. | Section 01 33 00 | SUBMITTAL PROCEDURES |
| E. | Section 01 73 00 | EXECUTION |
| F. | Section 01 77 00 | CLOSEOUT PROCEDURES |
| G. | Section 01 78 39 | CONTRACT RECORD DOCUMENTS |
| H. | Section 01 81 19 | INDOOR AIR QUALITY FOR LEED BUILDINGS |

1.4 DEFINITIONS:

- A. **ADHESIVE:** Any substance used to bond one surface to another by attachment. Includes adhesive primers and adhesive bonding primers.
1. **Aerosol Adhesive:** Any adhesive packaged as an aerosol with a spray mechanism permanently housed in a non-refillable can designed for hand-held application without the need for ancillary equipment.
- B. **CARCINOGEN:** A chemical listed as a known, probable, reasonably anticipated, or possible human carcinogen by the International Agency for Research on Cancer (IARC) (Groups 1, 2A, and 2B), the National

VOLATILE ORGANIC COMPOUND (VOC) LIMITS FOR ADHESIVES,
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Toxicology Program (NTP) (Groups 1 and 2), the U.S. Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS) (weight-of-evidence classifications A, B1, B2, and C, carcinogenic, likely to be carcinogenic, and suggestive evidence of carcinogenicity or carcinogen potential), or the Occupational Safety and Health Administration (OSHA).

- C. **CLEAR WOOD FINISH:** Clear/semi-transparent coating applied to wood substrates to provide a transparent or translucent solid film.
1. **Lacquer:** Clear/semi-transparent coating formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and provide a solid, protective film.
 2. **Sanding Sealer:** A sanding sealer that also meets the definition of a lacquer.
 3. **Varnish:** Clear/semi-transparent coating, excluding lacquers and shellacs, formulated to dry by chemical reaction on exposure to air. May contain small amounts of pigment.
- D. **COATING:** Liquid, liquefiable, or mastic composition that is converted to a solid adherent film after application to a substrate as a thin layer; and is used for decorating, protecting, identifying or to serve some functional purpose such as the filling or concealing of surface irregularities or the modification of light and heat radiation characteristics; and is intended for on-site application to interior or exterior surfaces of buildings. Does not include stains, clear finishes, recycled latex paint, specialty (industrial, marine or automotive) coatings or paint sold in aerosol cans.
- E. **FLOOR COATING:** Opaque coating applied to flooring. Excludes industrial maintenance coatings.
- F. **HAZARDOUS AIR POLLUTANT:** Any compound listed by the U.S. EPA in the Clean Air Act Section 112(b)(1) as a hazardous air pollutant.
- G. **MUTAGEN:** A chemical that meets the criteria for category 1, chemicals known to induce heritable mutations or to be regarded as if they induce heritable mutations in the germ cells of humans, under the Harmonized System for the Classification of Chemicals Which Cause Mutations in Germ Cells (United Nations Economic Commission for Europe, Globally Harmonized System of Classification and Labeling of Chemicals).
- H. **OZONE-DEPLETING COMPOUNDS:** A compound with an ozone-depletion potential greater than 0.1 (CFC 11=1) according to the U.S. EPA list of Class I and Class II Ozone-Depleting Substances.
- I. **PAINT:** A pigmented coating. For the purposes of this specification, paint primers are considered to be paints.
1. **Flat Coating or Paint:** Has a gloss of less than 15 (using an 85-degree meter) or less than 5 (using a 60-degree meter).
 2. **Non-Flat Coating or Paint:** Has a gloss of greater than or equal to 15 (using an 85-degree meter) or greater than or equal to 5 (using a 60-degree meter).
 3. **Non-Flat High-Gloss Coating or Paint:** Has a gloss of greater than or equal to 70 (using a 60-degree meter).
 4. **Anti-Corrosive / Rust Preventative Paint:** Coating formulated and recommended for use in preventing the corrosion of ferrous metal substrates.
- J. **PRIMER:** Coating that is formulated and recommended for one or more of the following purposes: to provide a firm bond between the substrate and a subsequent coating; to prevent a subsequent coating from being absorbed into the substrate; to prevent harm to a subsequent coating from materials in the substrate; or to provide a smooth surface for application of a subsequent coating.
- K. **REPRODUCTIVE TOXIN:** A chemical listed as a reproductive toxin (including developmental, female, and male toxins) by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (California Code of Regulations, Title 22, Division 2, Subdivision 1, Chapter 3, Sections 1200, et. Seq.).
- L. **SANDING SEALER:** Clear/semi-transparent coating formulated to seal bare wood. Can be abraded to create a smooth surface for subsequent coatings. Does not include sanding sealers that are lacquers (see Clear Wood Finish above).
- M. **SEALANT:** Any material with adhesive properties, formulated primarily to fill, seal, or waterproof gaps or joints between surfaces. Includes sealant primers and caulks.



- N. SHELLAC: Clear or pigmented coating formulated solely with the resinous secretions of the lac beetle, thinned with alcohol and formulated to dry by evaporation without chemical reaction. Excludes floor applications.
- O. STAIN: Clear semi-transparent/opaque coating formulated to change the color but not conceal the grain pattern or texture of the substrate.
- P. VOLATILE AROMATIC COMPOUND: Any hydrocarbon compound containing one or more 6-carbone benzene rings, and having an initial boiling point less than or equal to 280 degrees Celsius measured at standard conditions of temperature and pressure.
- Q. VOLATILE ORGANIC COMPOUND: Any compound of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) which vaporizes (becomes a gas) and participates in atmospheric photochemical reactions, as specified in Part 51.00 of Chapter 40 of the U.S. Code of Federal Regulations, at normal room temperatures. For the purposes of this specification, formaldehyde and acetaldehyde are considered to be VOCs.
- R. WATERPROOFING SEALER: A coating that prevents the penetration of water into porous substrates.

1.5 GENERAL REQUIREMENTS:

- A. The City of New York is committed to implementing good environmental practices and procedures which include achieving a LEED Green building rating. Specific project requirements related to this goal which may impact this area of work are listed in the applicable paragraphs of this specification section. The Contractor shall ensure that the requirements as defined in the sections below and in related sections of the Contract Documents, are implemented to the fullest extent. Substitutions, or other changes to the work proposed by the Contractor or their Subcontractors, shall not be allowed if such changes compromise the stated environmental goals.

1.6 REFERENCES:

- A. Rule 1168 – “Adhesive and Sealant Applications”, amended 7 January 2005): South Coast Air Quality Management District (SCAQMD), State of California, www.aqmd.gov
- B. Rule 1113 - “Architectural Coatings”, amended 9 July 2004: South Coast Air Quality Management District (SCAQMD), State of California, www.aqmd.gov
- C. Green Seal Standard GS-11- “Paints”, of Green Seal, Inc., Washington, DC, www.greenseal.org
- D. Green Seal Standard GC-03- “Anti-Corrosive Paints”, of Green Seal, Inc., Washington, DC, www.greenseal.org

1.7 VOC REQUIREMENTS FOR INTERIOR ADHESIVES, SEALANTS, PAINTS AND COATINGS:

- A. GENERAL: Unless otherwise specified herein, the VOC content of all interior adhesives, sealants, paints and coatings (herein referred to as “products”) shall not be in excess of **250 grams per liter**.
- B. No product shall contain any ingredients that are carcinogens, mutagens, reproductive toxins, persistent bioaccumulative compounds, hazardous air pollutants, or ozone-depleting compounds. An exception shall be made for titanium dioxide and, for products that are pre-tinted by the manufacturer, carbon black, which shall be less than or equal to 1% by weight of the product.
- C. No product shall contain the following:
 - 1. methylene chloride
 - 2. 1,1,1-trichloroethane
 - 3. benzene
 - 4. toluene
 - 5. ethylbenzene



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6. vinyl chloride
7. naphthalene
8. 1,2-dichlorobenzene
9. di (2-ethylhexyl) phthalate
10. butyl benzyl phthalate
11. di-n-butyl phthalate
12. di-n-octyl phthalate
13. diethyl phthalate
14. dimethyl phthalate
15. isophorone
16. antimony
17. cadmium
18. hexavalent chromium
19. lead
20. mercury
21. formaldehyde
22. methyl ethyl ketone
23. methyl isobutyl ketone
24. acrolein
25. acrylonitrile

D. No product shall contain more than 1.0% by weight of sum total of volatile aromatic compounds.

1.8 VOC REQUIREMENTS FOR INTERIOR ADHESIVES:

- A. The volatile organic compound (VOC) content of adhesives, adhesive bonding primers, or adhesive primers used in this project shall not exceed the limits defined in Rule 1168 – “Adhesive and Sealant Applications” of the South Coast Air Quality Management District (SCAQMD), of the State of California.
- B. The VOC limits defined by SCAQMD are as follows. All VOC limits are defined in grams per liter, less water and less exempt compounds.
- C. For specified building construction related applications, the allowable VOC content is as follows:

1. Architectural Applications:	
a. Indoor carpet adhesive	50
b. Carpet pad adhesive	50
c. Wood flooring adhesive	100
d. Rubber floor adhesive	60
e. Subfloor adhesive	50
f. Ceramic tile adhesive	65
g. VCT and asphalt tile adhesive	50
h. Drywall and panel adhesive	50
i. Cove base adhesive	50
j. Multipurpose construction adhesive	70
k. Structural glazing adhesive	100
2. Specialty Applications:	
a. PVC welding	510
b. CPVC welding	490
c. ABS welding	325
d. Plastic cement welding	250
e. Adhesive primer for plastic	550
f. Contact Adhesive	80

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SEALANTS, PAINTS & COATINGS FOR LEED BUILDINGS



- g. Special Purpose Contact Adhesive 250
- h. Structural Wood Member Adhesive 140
- i. Sheet Applied Rubber Lining Operations 850
- j. Top and Trim Adhesive 250
- 3. Substrate Specific Applications:
 - a. Metal to metal 30
 - b. Plastic foams 50
 - c. Porous material (except wood) 50
 - d. Wood 30
 - e. Fiberglass 80
- 4. Aerosol Adhesives:
 - a. General purpose mist spray 65% VOC's by weight
 - b. General purpose web spray 55% VOC's by weight
 - c. Special purpose aerosol adhesives (all types) 70% VOC's by weight

1.9 VOC REQUIREMENTS FOR INTERIOR SEALANTS:

- A. The volatile organic compound (VOC) content of sealants, or sealant primers used in this project shall not exceed the limits defined in Rule 1168 – “Adhesive and Sealant Applications” of the South Coast Air Quality Management District (SCAQMD), of the State of California.
- B. The VOC limits defined by SCAQMD are as follows. All VOC limits are defined in grams per liter, less water and less exempt compounds.
 - 1. Sealants:
 - a. Architectural 250
 - b. Non-membrane roof 300
 - c. Roadway 250
 - d. Single-ply roof membrane 450
 - e. Other 420
 - 2. Sealant Primer:
 - a. Architectural – Nonporous 250
 - b. Architectural – Porous 775
 - c. Other 750

1.10 VOC REQUIREMENTS FOR INTERIOR PAINTS:

- A. Paints and Primers: Paints and primers used in non-specialized interior applications (i.e., for wallboard, plaster, wood, metal doors and frames, etc.) shall meet the VOC limitations of the Green Seal Paint Standard GS-11, of Green Seal, Inc., Washington, DC. Product-specific environmental requirements are as follows:
 - 5. Volatile Organic Compounds:
 - a. The VOC concentrations (in grams per liter) of the product shall not exceed those listed below as determined by U. S. Environmental Protection Agency (EPA) Reference Test Method 24.
 - Interior Paints and Primers:
 - Non-flat: 150 g/l
 - Flat: 50 g/l
- The calculation of VOC shall exclude water and tinting color added at the point of sale.



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- B. Anti-Corrosive and Anti-Rust Paints: Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates shall meet the VOC limitations of the Green Seal Paint Standard GC-03, of Green Seal, Inc., Washington, DC. Product-specific environmental requirements are as follows:
1. Volatile Organic Compounds:

- a. The VOC concentrations (in grams per liter) of the product shall not exceed those listed below as determined by U. S. Environmental Protection Agency (EPA) Reference Test Method 24.

Anti-Corrosive and Anti-Rust Paints: 250 g/l

The calculation of VOC shall exclude water and tinting color added at the point of sale.

1.11 VOC REQUIREMENTS FOR INTERIOR COATINGS:

- A. Clear wood finishes, floor coatings, stains, sealers, and shellacs applied to the interior shall meet the VOC limitations defined in Rule 1113, "Architectural Coatings" of SCAQMD, of the State of California. The VOC limits defined by SCAQMD, based on 7/9/04 amendments, are as follows. VOC limits are defined in grams per liter, less water and less exempt compounds.

1. Clear Wood Finishes:	
a. Varnish	350
b. Sanding Sealers	350
c. Lacquer	550
2. Shellac:	
a. Clear	730
b. Pigmented	550
3. Stains	250
4. Floor Coatings	100
5. Waterproofing Sealers	250
6. Sanding Sealers	275
7. Other Sealers	200

The calculation of VOC shall exclude water and tinting color added at the point of sale.

1.12 SUBMITTALS:

- A. Submit Material Safety Data Sheets, for all applicable products in accordance with Section 01 33 00, SUBMITTAL PROCEDURES. Applicable products include, but are not limited to adhesives, sealants, carpets, paints and coatings. Material Safety Data Sheets shall indicate the Volatile Organic Compound (VOC) limits of products submitted. (If an MSDS does not include a product's VOC limits, then product data sheets, manufacturer literature, or a letter of certification from the manufacturer can be submitted in addition to the MSDS to indicate the VOC limits).
- B. Submit Environmental Building Materials Certification Form (EBMCF): For each field-applied adhesive, sealant, paint, and coating product, provide the VOC requirement, as provided in this Specification, for the relevant material category indicated on the documentation noted above.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 81 13.13



**SECTION 01 81 19
INDOOR AIR QUALITY REQUIREMENTS FOR LEED BUILDINGS**

REFER TO THE ADDENDUM FOR APPLICABILITY OF THIS SECTION 01 81 19

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].

1.2 CONSTRUCTION IAQ MANAGEMENT GOALS FOR THE PROJECT:

- A. The City of New York has determined that this Project shall minimize the detrimental impacts on Indoor Air Quality (IAQ) resulting from construction activities. Factors that contaminate indoor air, such as dust entering HVAC systems and ductwork, improper storage of materials on-site, poor housekeeping, shall be minimized.

1.3 RELATED SECTIONS:

- A. All sections of the Specifications related to interior construction, MEP systems, and items affecting indoor air quality.
- B. Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS
- C. Section 01 81 13.13, VOLATILE ORGANIC COMPOUND (VOC) LIMITS FOR ADHESIVES, SEALANTS, PAINTS AND COATINGS.
- D. Division 9 (of the Specifications): Finishes.

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.
- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- C. Volatile Organic Compounds (VOC's): Chemical compounds common in and emitted by many building products, including solvents in paints, coatings, adhesives and sealants, wood preservatives, composite wood binder, and foam insulations. Not all VOC's are harmful, but many of those contained within building products contribute to the formation of smog and may irritate building occupants by their smell and/or health impact.



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- D. Materials that act as “sinks” for VOC contamination: Absorptive materials, typically dry and soft materials (such as textiles, carpeting, acoustical ceiling tiles and gypsum board) that readily absorb VOC’s emitted by “source” materials and release them over a prolonged period of time.
- E. Materials that act as “sources” for VOC contamination: Products with high VOC contents that emit VOC’s either rapidly during application and curing (typically “wet” products, such as paints, sealants, adhesives, caulks and sealers) or over a prolonged period (typically “dry” products such as flooring coverings with plasticizers and engineered wood with formaldehyde).

1.5 REFERENCES, RESOURCES:

- A. “IAQ Guidelines for Occupied Buildings Under Construction”, First Edition, November 1995, The Sheet Metal and Air Conditioner Contractors National Association (SMACNA). (703) 803-2980, www.smacna.org.
- B. ANSI/ASHRAE 52.2-1999, “Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size”, www.ashrae.org

1.6 LEED BUILDING GENERAL REQUIREMENTS:

- A. Implement practices and procedures as necessary to meet the project’s environmental performance goals as set forth in the specific requirements of this section. Specific project goals that may impact this area of work include: use of recycled-content materials; use of low-emitting materials; construction waste recycling; and the implementation of a construction indoor air quality management plan. Ensure that the requirements related to these goals, as defined in this Section, are implemented to the fullest extent. Substitutions or other changes to the work shall not be allowed if such changes compromise the stated LEED BUILDING Performance Criteria.

1.7 CONSTRUCTION IAQ MANAGEMENT PLAN :

- A. The Contractor shall prepare a Construction IAQ Management Plan in coordination with each subcontractor and submit the IAQ Management Plan to the Commissioner for approval in accordance with Section 01 33 00, SUBMITTAL PROCEDURE. The Construction IAQ Management Plan shall meet the following criteria:
 - 1. Construction activities shall be planned to meet or exceed the minimum requirements of the Sheet Metal and Air Conditioning National Contractors’ Association (SMACNA) “IAQ Guidelines for Occupied Buildings under Construction”, First Edition, 1995.
 - 2. Absorptive materials shall be protected from moisture damage when stored on-site and after installation.
 - 3. If air handlers are to be used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 must be used at each return air grill, as determined by ASHRAE 52.2-1999.
 - 4. Filtration media shall be replaced immediately prior to occupancy. Filtration media shall have a Minimum Efficiency Reporting Value (MERV) of 13 as determined by ASHRAE 52.2-1999 if the project is pursuing Indoor Air Quality Credit 5: Indoor Chemical Pollutant Source Control.
 - 5. A “Sequence of Finish Installation Plan” shall be developed, highlighting measures to reduce the absorption of VOCs by materials that act as “sinks”.
 - 6. Upon approval of the Plan by the Commissioner, it shall be implemented by the Contractor through the duration of the construction process, and documented in accordance with the Submittal Requirements of Sub-Section 1.8 herein.
- B. Further description of the Construction IAQ Management Plan requirements is as follows:



1. SMACNA Guidelines: Chapter 3 of the referenced "IAQ Guidelines for Occupied Buildings Under Construction", outline IAQ measures in five categories as listed below. The Construction IAQ Management Plan shall be organized in accordance with the SMACNA format, and shall address measures to be implemented in each of the five categories (including subsections). All subsections shall be listed in the Plan; items that are not applicable for this project should be listed as such.
 - a. HVAC Protection
 - 1) Protect air handling and distribution equipment and air supply and return ducting during construction.
 - 2) All ductwork arriving on site will be sealed with plastic sheeting and stored on pallets or dunnage until installed.
 - 3) Cover and protect all exposed air inlets and outlets, openings, grilles, ducts, plenums, etc. to prevent water, moisture, dust and other contaminant intrusion.
 - 4) Apply protection immediately after ducting.
 - 5) Protect ducting runs at the end of day's work.
 - 6) Inspect temporary filtration weekly and replace as required to maintain the proper ventilation rates in the building.
 - b. Source Control
 - 1) Protect stored on-site or installed absorptive or porous materials.
 - 2) Do not use wet or damaged porous materials in the building.
 - 3) Recover, isolate, and ventilate containers housing toxic materials and materials with VOC levels above the limits for interior adhesives, sealants, paints, and coatings described in these Specifications.
 - 4) Exhaust fumes from idling vehicles and gasoline fueled tools through use of funnels or temporary piping.
 - 5) Containers housing toxic materials and materials with VOC levels above the limits for interior adhesives, sealants, paints, and coatings described in these Specifications, shall be closed when not in use.
 - c. Pathway Interruption
 - 1) Depressurize work areas to contain dust and odors.
 - 2) Pressurize occupied spaces to prevent intrusion of dust and odors.
 - 3) Erect barriers to contain construction areas.
 - 4) Relocate pollutant sources.
 - 5) Temporarily seal the building and provide 100% outside air for ventilation.
 - d. Housekeeping
 - 1) Store materials on elevated platforms under cover, in a designated dry, clean location, prior to unpacking for installation.
 - 2) If materials are not stored in an enclosed location, cover tops and sides of material with waterproof sheeting, securely tied.
 - 3) Institute cleaning activities to remove contaminants from the building prior to occupancy. Clean all coils, air filters, and ductwork prior to performing testing, adjusting, and balancing of HVAC systems.
 - 4) Sweep the work area on a daily basis. Use an efficient and effective dust collecting method such as damp cloth, wet mop, or vacuum with particulate filters. Activities which produce high levels of dust shall be cleaned up immediately upon completion.
 - 5) Spills or excess applications of products containing solvents, or with VOC levels above the limits for interior adhesives, sealants, paints, and coatings described in these Specifications, must be removed immediately.
 - 6) Dust all walls prior to application of finishes.
 - 7) Vacuum all stud tracks prior to application of insulation.
 - 8) Materials which become contaminated through direct exposure to moisture from precipitation, plumbing leaks, or condensation shall be replaced by the Contractor.
 - e. Scheduling
 - 1) Phase construction such that absorptive materials are installed only in areas that are



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- weathertight.
- 2) Schedule activities that utilize “sources” of VOC contamination to take place prior to installing high absorbent materials that will act as “sinks” for contaminants.
 - 3) Review of the appropriate components of the Construction IAQ Management Plan shall be a regular action topic at weekly site coordination meetings. Implementation of the Plan shall be documented in the meeting minutes.
2. Protection of Materials from Moisture Damage: As part of the “Housekeeping” section of the Construction IAQ Management Plan, measures to prevent installed materials or material stored on-site from moisture damage shall be described. This section should also describe measures to be taken if moisture damage does occur to absorptive materials during the course of construction.
 3. Replacement of Filtration Media: Under the “HVAC Protection” section of the Construction IAQ Management Plan, a description of the filtration media in all ventilation equipment shall be provided. The description shall include replacement criteria for filtration media during construction, and confirmation of filtration media replacement for all equipment immediately prior to occupancy.
 4. Sequence of Finish Installation for Materials: Where feasible, absorptive materials shall be installed after the installation of materials or finishes which have high short-term emissions of VOC’s, formaldehyde, particulates, or other air-borne compounds. Absorptive materials include, but are not limited to: carpets; acoustical ceiling panels; fabric wall coverings; insulations (exposed to the airstream); upholstered furnishings; and other woven, fibrous or porous materials. Materials with high short-term emissions include, but are not limited to: adhesives, sealants and glazing compounds (specifically those with petrochemical vehicles or carriers); paints, wood preservatives and finishes; control and/or expansion joint fillers; hard finishes requiring adhesive installation; gypsum board (with associated finish processes and products); and composite or engineered wood products with formaldehyde binders.
 5. Develop and implement an Indoor Air Quality (IAQ) Management Plan for the pre-occupancy phase as follows:

OPTION 1 — Flush-Out

- After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out by supplying a total air volume of 14,000 cu.ft. of outdoor air per sq.ft. of floor area while maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60%.

OR

- If occupancy is desired prior to completion of the flush-out, the space may be occupied following delivery of a minimum of 3,500 cu.ft. of outdoor air per sq.ft. of floor area to the space. Once a space is occupied, it shall be ventilated at a minimum rate of 0.30 cfm/sq.ft. of outside air or the design minimum outside air rate determined in EQ Prerequisite 1, whichever is greater. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy. These conditions shall be maintained until a total of 14,000 cu.ft./sq.ft. of outside air has been delivered to the space.

OR

OPTION 2 — Air Testing

- Conduct baseline IAQ testing, after construction ends and prior to occupancy, using testing protocols consistent with the United States Environmental Protection Agency Compendium of



Methods for the Determination of Air Pollutants in Indoor Air and as additionally detailed in the LEED-NC Reference Guide.

- Demonstrate that the contaminant maximum concentrations listed below are not exceeded.

CONTAMINANT	MAXIMUM CONCENTRATION
Formaldehyde	27 parts per billion
Particulates (PM10)	50 micrograms per cubic meter
Total Volatile Organic Compounds (TVOC)	500 micrograms per cubic meter
* 4-Phenylcyclohexene (4-PCH)	6.5 micrograms per cubic meter
Carbon Monoxide (CO)	9 part per million and no greater than 2 parts per million above outdoor levels
* This test is only required if carpets and fabrics with styrene butadiene rubber (SBR) latex backing material are installed as part of the base building systems.	

- For each sampling point where the maximum concentration limits are exceeded, conduct additional flush-out with outside air and retest the specific parameter(s) exceeded to indicate the requirements are achieved. Repeat procedure until all requirements have been met. When retesting non-complying building areas, take samples from the same locations as in the first test.
- The air sample testing shall be conducted as follows:
 - a. All measurements shall be conducted prior to occupancy, but during normal occupied hours and with the building ventilation system starting at the normal daily start time and operated at the minimum outside air flow rate for the occupied mode throughout the duration of the air testing.
 - b. The building shall have all interior finishes installed, including but not limited to millwork, doors, paint, carpet and acoustic tiles. Non-fixed furnishings such as workstations and partitions are encouraged, but not required, to be in place for the testing.
 - c. The number of sampling locations will vary depending upon the size of the building and number of ventilation systems. For each portion of the building served by a separate ventilation system, the number of sampling points shall not be less than one per 25,000 sq.ft., or for each contiguous floor area, whichever is larger, and include areas with the least ventilation and greatest presumed source strength.
 - d. Air samples shall be collected between 3 feet and 6 feet from the floor to represent the breathing zone of occupants, and over a minimum 4-hour period.
- 6. Implementation and Coordination: Implement the Construction IAQ Management Plan, and coordinate the Plan with all affected trades. Designate one individual as the Construction IAQ Representative at no additional cost to the City of New York, who will be responsible for communicating the progress of the Plan with the Commissioner on a regular basis, and for assembling the required LEED documentation. Include provisions in the Construction IAQ Management Plan for addressing conditions in the field that do not adhere to the Plan, including provisions to implement a stop work order, or to rectify non-compliant conditions.
 - a. Distribution: The Contractor shall distribute copies of the Construction IAQ Management Plan in accordance with Section 01 33 00, SUBMITTAL PROCEDURES.
 - b. Instruction: The Contractor shall provide on-site instruction of appropriate site management to all Contractor's Subcontractors.



- c. Monitoring: The Construction IAQ Representative shall monitor the implementation of the Construction IAQ Management Plan.

1.8 SUBMITTALS:

Submit the following LEED-required records and documents in accordance with Section 01 33 00, SUBMITTAL PROCEDURES and Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS.

- A. A copy of the Construction IAQ Management Plan as defined in Sub-Section 1.7 herein.
- B. Product cut-sheets for all filtration media used during construction and installed immediately prior to occupancy, with MERV values highlighted. Cut sheets shall be submitted with the Contractor's or Subcontractor's 'approved' stamp as confirmation that the products are the products installed on the project.
- C. Provide the Commissioner with a minimum of 18 photographs as required under the provision for Special Photographs, in accordance with Section 01 32 33, PHOTOGRAPHIC DOCUMENTATION, comprised of at least six photographs taken on three different occasions during construction. The photographs shall document the implementation of the Construction IAQ Management Plan throughout the course of the project construction. Examples include photographs of ductwork sealing and protection, temporary ventilation measures, and conditions of on-site materials storage (to prevent moisture damage). Photographs shall include integral date stamping, and shall be submitted with brief descriptions of the Construction IAQ Management Plan measure documented, or be referenced to project meeting minutes or similar project documents which reference to the Construction IAQ Management Plan measure documented.
- D. A copy of the project's TAQ Testing report if applicable.

1.9 QUALITY ASSURANCE:

- A. The Contractor shall be responsible for preparing and implementing the Construction IAQ Management Plan and shall coordinate and incorporate the work of its subcontractors in the IAQ Management Plan.
- B. Responsibility of Subcontractors: Subcontractors for this project shall be responsible to cooperate with the Contractor in the preparation and implementation of the Construction IAQ Management Plan.

PART II – PRODUCTS (Not Used)

PART III – EXECUTION (Not Used)

END OF SECTION 01 81 19



**SECTION 01 91 13
GENERAL COMMISSIONING REQUIREMENTS**

REFER TO THE ADDENDUM FOR APPLICABILITY OF THIS SECTION 01 91 13

PART I – GENERAL

1.1 RELATED DOCUMENTS:

- A. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum, and (5) the Contract [City of New York Standard Construction Contract].
- B. OPR and BoD documentation are included by reference for information only.
- C. The Commissioning Plan, prepared by the Commissioning Agent (CxA) under separate contract with the City of New York, contains requirements that apply to this section.

1.2 SUMMARY:

- A. This Section includes general requirements that apply to implementation of Commissioning without regard to systems, subsystems, and equipment being commissioned.
- B. This Section includes:
 - 1. Definitions
 - 2. Commissioning Team
 - 3. City's Responsibilities
 - 4. Each Contractor's Responsibilities
 - 5. Commissioning Authority's/Agent's (CxA) Responsibilities
 - 6. Commissioning Documentation
 - 7. Submittals
 - 8. Coordination

1.3 RELATED SECTIONS: Include without limitation the following:

- A. "HVAC Commissioning Requirements" indicated in other sections of the project specifications for specific requirements for commissioning HVAC systems.
- B. This project will be commissioned by an independent third party under separate contract with the City of New York. Commissioning shall be in accordance with ASHRAE and USGBC LEED procedures, and specific commissioning requirements of the Project Specifications, whichever is more stringent. The Contractor shall cooperate with the CxA and provide whatever assistance is required.
- C. Related Sections include without limitation the following:
 - 1. Section 01 10 00 SUMMARY
 - 2. Section 01 31 00 PROJECT MANAGEMENT AND COORDINATION
 - 3. Section 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION
 - 4. Section 01 78 39 CONTRACT RECORD DOCUMENTS
 - 5. Section 01 79 00 DEMONSTRATION AND TRAINING
 - 6. Section 01 81 13 SUSTAINABLE DESIGN REQUIREMENTS FOR LEED BUILDINGS

1.4 DEFINITIONS:

- A. Refer to Article 2 of the Contract for definition of terms, words and expressions used in the General Conditions not otherwise defined herein.



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- B. Design Consultant: "Design Consultant" shall mean the entity responsible for providing design services for the Project, including without limitation, preparing the construction documents (drawings and specifications) and providing services in connection with such documents during construction. The entity serving as the "Design Consultant" may be a corporation, firm, partnership, joint venture, individual or combination thereof. Such entity may be either an employee(s) of the City or an entity engaged by the City to provide such services.
- C. Commissioner: The Commissioner of the Department of Design and Construction of the City of New York, his/her successors, or duly authorized representative(s).
- D. BoD: Basis of Design: A document, prepared by the Consultant Architect/Engineer, that records concepts, calculations, decisions, and product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.
- E. Commissioning Plan: A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the commissioning process.
- F. CxA: Commissioning Agent (Aka Commissioning Authority) under separate contract with the City of New York to provide Commissioning Services for this project.
- G. OPR: Owner's (City of New York) Project Requirements: A document, prepared by the Consulting Architect/Engineer that details the functional requirements of a project and the expectations of how it will be used and operated. These include Project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information.
- H. Systems, Subsystems, Equipment, and Components: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, equipment, and components.
- I. TAB: Testing, Adjusting, and Balancing.

1.5 COMMISSIONING TEAM:

- A. Members Appointed by the Contractor and its Subcontractors: Individuals, each having authority to act on behalf of the entity he or she represents, explicitly organized to implement the commissioning process through coordinated actions. The Commissioning Team shall consist of, but not be limited to, representatives of the Contractor, including Project superintendent and subcontractors, installers, suppliers, and specialists deemed appropriate by the CxA.
- B. Members Appointed by the City:
 - 1. Commissioning Authority/Agent (CxA): The designated person, company, or entity under separate contract with the City that plans, schedules, and coordinates the commissioning team to implement the commissioning process.
 - 2. Representatives of the facility user and operation and maintenance personnel.
 - 3. Consultant Architect/Engineer and other concerned entities.

1.6 CITY'S RESPONSIBILITIES:

- A. Provide the OPR documentation to the Commissioning Agent (CxA) for use in developing the commissioning plan; systems manual; operation and maintenance training plan; and testing plans and checklists.
- B. Assign operation and maintenance personnel and schedule them to participate in commissioning team activities.



- C. Provide the BoD documents, prepared by the Consulting Architect/Engineer and approved by the Commissioner, to the Commissioning Agent (CxA) for use in developing the commissioning plan, systems manual, and operation and maintenance training plan.

1.7 CONTRACTOR'S RESPONSIBILITIES:

- A. The Contractor shall provide utility services required for the commissioning process.
- B. As a member of the Commissioning Team, the Contractor and subcontractor(s) shall assign representatives with expertise and authority to act on behalf of the Contractor and its subcontractor(s) and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:
 - 1. Participate in scheduled construction-phase coordination and commissioning team meetings.
 - 2. Integrate and coordinate commissioning process activities with the construction schedule.
 - 3. Review and accept commissioning process test procedures provided by the CxA.
 - 4. Review and accept construction checklists provided by the CxA.
 - 5. Perform testing required in the Commissioning Schedule as per the Commissioning Process test procedures provided by the CxA.
 - 6. Complete installation checklists as Work is completed and return to CxA through the Resident Engineer.
 - 7. Cooperate with the CxA for resolution of issues recorded in the Issues Log.
 - 8. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
 - 9. Submit As-Built documents, operation and maintenance manuals for systems and subsystems, and equipment in accordance with Section 01 78 39, CONTRACT RECORD DOCUMENTS.
 - 10. Provide orientation sessions for operation and maintenance personnel (sessions will be video recorded by the CxA) in accordance with Section 01 79 00, DEMONSTRATION AND OWNER'S PRE-ACCEPTANCE ORIENTATION.

1.8 COMMISSIONING AGENT'S (CxA) RESPONSIBILITIES:

- A. Organize and lead the commissioning team.
- B. Prepare a construction-phase commissioning plan. Collaborate through the Resident Engineer with each Contractor and with subcontractors to develop test and inspection procedures. Include design changes and coordinate commissioning activities with the overall Project schedule. Identify commissioning team member responsibilities, by name, firm, and trade specialty, for performance of each commissioning task.
- C. Review and comment in accordance with Section 01 33 00, SUBMITTAL PROCEDURES, on submittals from the Contractor for compliance with the OPR, BoD, Contract Documents, and construction-phase commissioning plan. Review and comment on performance expectations of systems and equipment and interface between systems relating to the OPR and BoD.
- D. Coordinate with the Resident Engineer to convene commissioning team meetings for the purpose of coordination, communication, and conflict resolution; discuss progress of the commissioning processes. Responsibilities include arranging for facilities, preparing agenda and attendance lists, and notifying participants. The Commissioning Agent CxA will prepare and distribute minutes to commissioning team members and attendees within three workdays of the commissioning meeting.
- E. At the beginning of the construction phase, coordinate with the Resident Engineer's kick-off meeting schedule to conduct an initial construction-phase coordination meeting for the purpose of reviewing the commissioning activities and establishing tentative schedules for operation and maintenance submittals, operation and maintenance training sessions, TAB Work, and Project completion.



- F. Observe and inspect construction. Report progress and deficiencies to the Commissioner. In addition to compliance with the OPR, BoD, and Contract Documents, inspect systems and equipment installation for adequate accessibility required for component maintenance replacement and repair.
- G. Prepare Project-specific test and inspection procedures and checklists.
- H. Coordinate with the Resident Engineer to schedule, direct, witness, and document tests, inspections, and systems startup.
- I. Compile test data, inspection reports, and certificates and include them in the systems manual and commissioning report.
- J. Certify date of acceptance and startup for each item of equipment for start of warranty periods.
- K. Review and comment on operation and maintenance documentation and systems manual outline for compliance with the OPR, BoD, and Contract Documents. Operation and maintenance documentation requirements are specified in other sections of the project specifications and described in Section 01 78 39, CONTRACT RECORD DOCUMENTS.
- L. Record and edit demonstration and orientation sessions on DVD.
- M. Prepare commissioning reports.
- N. Assemble the final commissioning documentation, including the commissioning report and Systems Manual.

1.9 COMMISSIONING DOCUMENTATION:

The Contractor shall assist the Commissioning Agent (CxA) in the development and compiling of the following Commissioning Documentation:

- A. Index of Commissioning Documents: The Commissioning Agent (CxA) will prepare an index including the storage location of each document.
- B. OPR: A written document prepared by the Consulting Architect/Engineer that details the functional requirements of the Project and expectations of how it will be used and operated. This document includes the Project and design goals, measurable performance criteria, budgets, schedules, success criteria, and supporting information.
- C. BoD Document: A document prepared by the Consulting Architect/Engineer that records concepts, calculations, decisions, and product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that explain the designed systems.
- D. Commissioning Plan: A document prepared by the Commissioning Agent (CxA) that outlines the schedule, allocation of resources, and documentation requirements of the commissioning process.
- E. Test Checklists: The Commissioning Agent (CxA) will develop test checklists for each system, subsystem, or equipment including interfaces and interlocks, and include a separate entry, with space for comments, for each item to be tested. The CxA will prepare separate checklists for each mode of operation and provide space to indicate whether the mode under test responded as required. Space will be provided for testing personnel to sign off on each checklist. Specific checklist content requirements are specified in other sections of the project specifications.
- F. Inspection Checklists will be signed by the Contractor, Subcontractor(s), Installer(s), and CxA certifying that systems, subsystems, equipment, and associated controls are ready for testing.
- G. Test and Inspection Reports: The Commissioning Agent (CxA) will record test data, observations, and measurements on test checklists. Photographs, forms, and other means appropriate for the application will be included with data. CxA shall compile test and inspection reports and test and inspection certificates and include them in systems manual and commissioning report.



- H. Corrective Action Documents: The Commissioning Agent (CxA) will document corrective action taken for systems and equipment that fail tests and include required modifications to systems and equipment and revisions to test procedures, if any. The Contractor shall retest systems and equipment requiring corrective action. The CxA will document retest results.
- I. Issues Log: The Commissioning Agent (CxA) will prepare and maintain an issues log that describes design, installation, and performance issues that are at variance with the OPR, BoD, and Contract Documents. The log will identify and track issues as they are encountered, documenting the status of unresolved and resolved issues.
 - 1. Commissioning Report: The Commissioning Agent (CxA) will document results of the commissioning process including unresolved issues and performance of systems, subsystems, and equipment. The commissioning report will indicate whether systems, subsystems, and equipment have been completed and are performing according to the OPR, BoD, and Contract Documents.
- J. Systems Manual: The Commissioning Agent (CxA) will gather required information and compile systems manual as specified in other sections of the project specifications and described in Section 01 78 39, CONTRACT RECORD DOCUMENTS..

1.10 SUBMITTALS:

- A. Commissioning Plan Pre-final Submittal: The Commissioning Agent (CxA) will submit six (6) copies of the pre-final commissioning plan to the Commissioner for review and distribution.
- B. Commissioning Plan Final Submittal: The Commissioning Agent (CxA) will submit six (6) hard copies and electronically formatted information of the final commissioning plan to the Commissioner. The final submittal will address previous review comments.
- C. Test and Inspection Reports: CxA will submit test and inspection reports.
- D. Corrective Action Documents: CxA will submit corrective action documents.

1.11 COORDINATION:

- A. Coordinating Meetings: The Commissioning Agent (CxA) will coordinate with the Resident Engineer's regularly scheduled construction progress meetings to conduct coordination meetings of the commissioning team to review progress on the commissioning plan, to discuss scheduling conflicts, and to discuss upcoming commissioning process activities.
- B. Pre-testing Meetings: The Commissioning Agent (CxA) will coordinate with the Resident Engineer to conduct pretest meetings of the commissioning team to review startup reports, pretest inspection results, testing procedures, testing personnel and instrumentation requirements, and manufacturers' authorized service representative services for each system, subsystem, equipment, and component to be tested.
- C. Testing Coordination: The Commissioning Agent (CxA) will coordinate with the Resident Engineer the sequence of testing activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Coordinate schedule times with the Resident Engineer for tests, inspections, obtaining samples, and similar activities.
- D. Manufacturers' Field Services: The Commissioning Agent (CxA) will coordinate services of manufacturers' field services.

PART II – PRODUCTS (Not Used)



PART III – EXECUTION

3.1 OPERATION & MAINTENANCE MANUALS

- A. General
1. The CxA shall review the Operation & Maintenance manuals provided by the Contractor or subcontractors for completeness of the document. The review process shall verify that Operation & Maintenance instructions meet specifications and are included for all commissioned equipment furnished by the Contractor.
 2. Published literature shall be specifically oriented to the provided equipment, indicating required operation and maintenance procedures, parts lists, assembly / disassembly diagrams and related information.
 3. The Contractor shall incorporate the standard technical literature into system specific formats for this facility as designed and as actually installed. The resulting Operation & Maintenance information shall be system specific, concise, to the point and tailored specifically to this facility. The CxA shall review these documents as necessary for final corrections by the Contractor.
- B. The Operation & Maintenance Manual review and coordination efforts shall be completed prior to Owner orientation sessions, as these documents are to be utilized in the training sessions.
- C. System Operations Manual
1. The CxA shall prepare and deliver these documents with inputs from other agencies. The contractors will confirm the proper documents are onsite and readily available. Typically, the manual includes the following:
 - a. Commissioned systems single line diagrams (Mechanical, Electrical, Plumbing, and Building Management System (BMS) subcontractors).
 - b. As built sequences of operations, control drawings and original set points (Architect, Engineer, and BMS subcontractor)
 - c. Operating instructions for integrated building systems (mechanical and BMS subcontractors).
 - d. Recommended schedule of maintenance requirements and frequency (subcontractors).
 - e. Recommended schedule for calibrating sensors and actuators (BMS subcontractor)

3.2 DEMONSTRATION AND INSTRUCTION

- A. The Contractor shall schedule and coordinate instruction sessions for the facility's staff for each commissioned system. Demonstrations shall be held per Contract Documents, along with the appropriate schematics, handouts and visual / audio training aids onsite with equipment.
- B. The equipment vendors shall provide instruction on the specifics of each major equipment item including philosophy, troubleshooting and repair techniques.
- C. For additional prescription pertinent to instruction, refer to other specific divisions for demonstration and instruction requirements.

3.3 WARRANTY REVIEW / SEASONAL TESTING

- A. The CxA will return upon the start of the new season (cooling or heating) after project completion to conduct performance tests that could not be performed due to ambient conditions. The seasonal testing will only be performed if unsuitable loads / conditions were unavailable during the performance testing stages (in other words; the requirement for testing is warranted).
- B. If agreed upon by facility, Seasonal Testing can also be used for the Warranty Review. During which the CxA will interview the occupants, maintenance staff, review the operation of the building, provide recommendations for installation and operational problems and document warranty and operational issues in the issues database.



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

3.4 RECORD DRAWINGS

- A. The CxA shall review the as built contract documents to verify incorporation of both design changes and as built construction details. Discrepancies noted shall be corrected by the appropriate party.

END OF SECTION 01 91 13

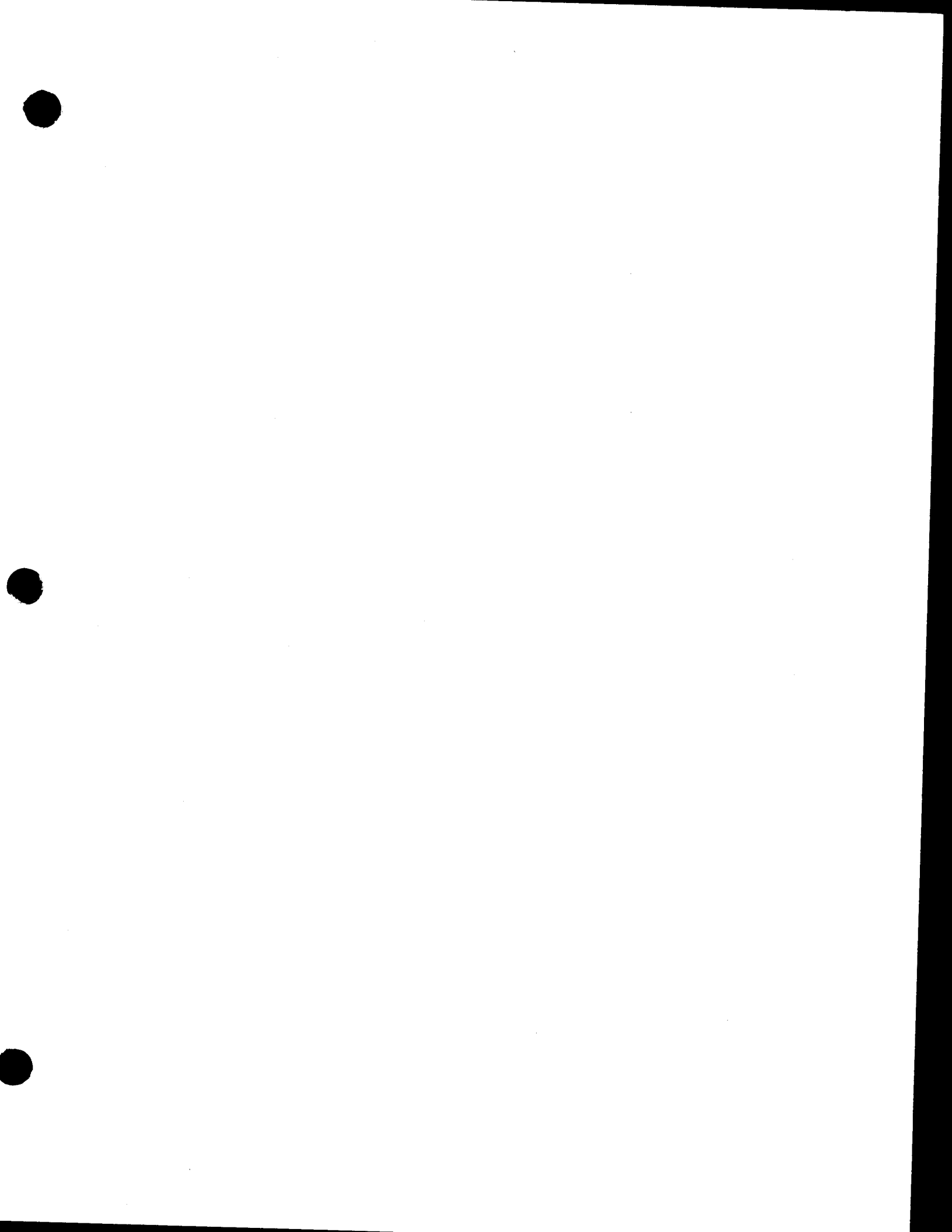


NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION

Division 01 – DDC STANDARD GENERAL CONDITIONS
SINGLE CONTRACT PROJECTS
Issue Date - June 01, 2013

No Text

GENERAL COMMISSIONING REQUIREMENTS
01 91 13 - 8



**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

30-30 THOMSON AVENUE
TELEPHONE (718) 391-1000

LONG ISLAND CITY, NEW YORK 11101-3045
WEBSITE www.nyc.gov/buildnyc

Contract for Furnishing all Labor and Material Necessary

Contractor

Dated _____, 20____

Approved as to Form
Certified as to Legal Authority

Acting Corporation Counsel

Dated _____, 20____

Entered in the Comptroller's Office

First Assistant Bookkeeper

Dated _____, 20____





FMS ID: S216-404A



**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

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

Contract for Furnishing all Labor and Material Necessary and Required for:

CONTRACT NO. 1 GENERAL CONSTRUCTION WORK

**Demolition of DSNY Facilities at
Gansevoort Peninsula**

LOCATION: 4 Bloomfield Street
BOROUGH: Manhattan 10004
CITY OF NEW YORK

Gramercy Group Inc
Contractor

Dated January 20, , 20 15

Approved as to Form
Certified as to Legal Authority

[Signature]
Acting Corporation Counsel

Dated April 4 , 20 14

Entered in the Comptroller's Office

First Assistant Bookkeeper:

Dated _____ , 20 _____

RF 4/04/14





PROJECT ID: S216-404A

**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

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

VOLUME 3 OF 3

**ADDENDUM TO THE GENERAL
CONDITIONS**

SPECIFICATIONS

FOR FURNISHING ALL LABOR AND MATERIALS
NECESSARY AND REQUIRED FOR:

**Demolition of DSNY Facilities at
Gansevoort Peninsula**

LOCATION:
BOROUGH:
CITY OF NEW YORK

4 Bloomfield Street
Manhattan 10004

CONTRACT NO. 1

GENERAL CONSTRUCTION WORK

DSNY

Syska - Hennessy Group

Date: February 20, 2014



174-088

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

May 2, 2014

ADDENDUM No. # 1

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

S216-404A

Demolition of DSNY Facilities at Gansevoort Peninsula

This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Revisions to the Bid Booklet:**

A Walk-Through for the Gansevoort Destructor Plant –Sealed Interior Spaces containing ACM and Hazmat Materials will be made available. Please see below for information.

- **Pre-Walk-through Sign-Up Required:** Interested and qualified bidders are required to submit their names to John Ziedonis by 2:00 PM, Tuesday, May 6, with a copy of the current, valid certification and fitness documentation. Only qualified bidders will be permitted to enter the sealed portions of the Destructor Plant. Those bidders not qualifying for entry will not be permitted to enter the building. Participants will be required to sign up for a specific one-hour time slot, and will be permitted to enter the site only at their allotted time. Participants must arrive at least 30 minutes prior to their scheduled tour time in order to verify credentials and prep for entry.
- **DDC Sign-Up Contact:** All contractors shall notify John Ziedonis by 2:00 PM, May 6, by telephone or email of their intent to attend the walk-through. Participants must provide their contact info to receive confirmation of their walk-through time. You must receive a confirmed walk-through time in order to be able to tour the sealed spaces. John Ziedonis contact information: **Telephone:** 718-391-2864 **E-mail:** ziedonijo@ddc.nyc.gov
- **Walk-Through Rules:** *Tour size is limited to 2 participants at a time.* Once inside the sealed area participants are not permitted to leave the group; the group will proceed through the spaces together. Those participants who do not follow the rules will be removed from the site.
- **Required of Walk-Through Participants:** All Contractor representatives entering the Destructor Plant buildings during the pre-bid walkover for the proposed Demolition of DSNY Facilities at Gansevoort Peninsula are required to possess:
 - a) a current New York State Department of Labor Asbestos certification, Inspector / Designer/ Handler Certification Level

- b) an operating flashlight (Note that there is no currently light source inside the spaces that are to be visited. A helmet with integral light source is recommended. A powerful light source is recommended)
- c) personal protective equipment including a full face respirator equipped with P100 cartridges, disposable full-body coveralls, a hard hat, safety glasses, steel toed construction boots, disposable over boots, and disposable gloves.
- d) Due to active truck traffic, retro-reflective vests are required to be worn by participants while on Gansevoort Peninsula.
- **Decontamination Unit:** A Decon Unit will be located at the entrance/exit to the sealed Destructor Plant. Full decontamination will be required upon exiting the sealed Destructor Plant spaces.
- **Walk-through Release Form:** Participants will be permitted to enter the sealed portion of the Destructor Plant upon agreeing to sign a release form.
- **Walk-Through Time and Duration:** 8:00 AM -4:00 PM, Wednesday May 7, 2014. Destructor plant viewing will be limited to one hour intervals.
- **Walk-Through Meeting Location:** Tour participants must sign-in at the DSNY site Superintendent's office located at the Northeast corner of Gansevoort Peninsula inside the entrance to Garage M2. Participants must arrive 30 minutes prior to their tour times with valid ID, and required current certifications (NYS DOL hard card), and all necessary personal protection and light source equipment. Tour participants will proceed on their own to the tour entry point on the south side of the Destructor Plant adjacent to the Decon Trailer.
- **Parking:** Vehicular parking for walk-through participants is not available on Gansevoort Peninsula.
- **Safety Note:** The Gansevoort Peninsula is an active DSNY facility and as such, participants entering the site must exercise caution and care to avoid accidents. Participants must take care and pay attention with regard to vehicular traffic while on the property.

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

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-2200, (718) 391-1283, or by fax at (718) 391-2615.

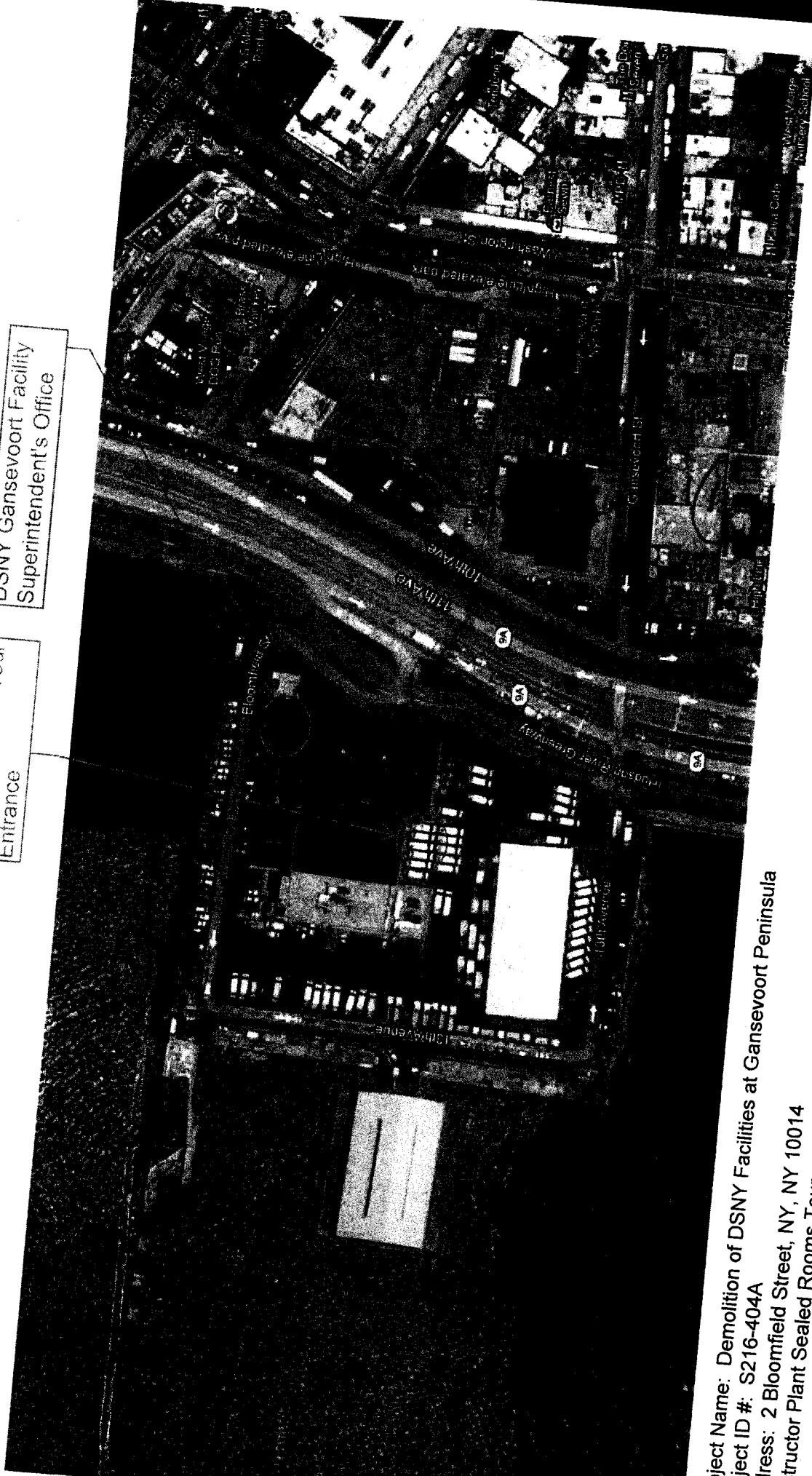

 David Resnick, R.A.
 Deputy Commissioner

 Name of Bidder

By: _____

Destructor Plant Tour
Entrance

DSNY Gansevoort Facility
Superintendent's Office



Project Name: Demolition of DSNY Facilities at Gansevoort Peninsula
Project ID #: S216-404A
Address: 2 Bloomfield Street, NY, NY 10014
Destructor Plant Sealed Rooms Tour

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

May 15, 2014

ADDENDUM No. # 2

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

S216-404A

Demolition of DSNY Facilities at Gansevoort Peninsula

This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Revised Bid Opening Date:**
The Bid Opening for the Contract described below scheduled for May 22th, 2014, at 2:00pm is rescheduled to June 10th, 2014 at 2:00pm.

Contract 1 – General Construction Work.
2. **Questions from Bidders and Responses to Questions:**
See Attachment A.
3. **Revisions to the Specifications:**
See Attachment B.
4. **Revisions to the Drawings:**
See Attachment C.
5. **Revisions to the Bid Booklet:**

Required Walk-through of the Gansevoort Destructor Plant Sealed Interior Spaces containing ACM and Hazmat Materials. Attendance is required in order to submit a bid:

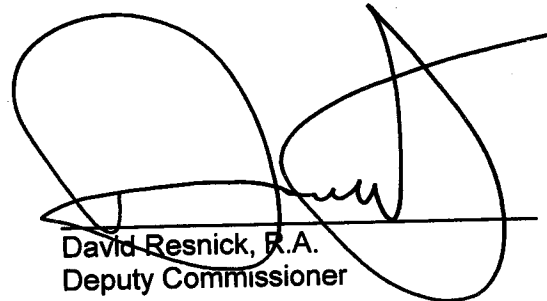
- **Walk-Through Time and Duration:** Wednesday May 21, 2014, 8:00 AM -6:00 PM.
Destructor plant viewing will be limited to one hour intervals.
 - a) As a requirement for submitting a bid for the Demolition of DSNY Facilities at Gansevoort Peninsula, **ALL Bidders (or their authorized representatives)** are required to attend a site walk-through of the Gansevoort Destructor Plant interior.
 - b) The purpose of this required site visit is for Bidders to view the extent and complexity of the asbestos abatement / hazmat material remediation required for the Destructor Plant building interior.

- c) Persons entering the building interior are required to have a current NYS DOL Asbestos Certification. Bidders who do not have the required certification may send an authorized representative, who has the necessary certification, to view the interior conditions. In order to qualify as an authorized representative, it must be stated by the Bidder that the person authorized to attend on the Bidder's behalf is knowledgeable and qualified to inspect and provide an accurate cost estimate for asbestos abatement / hazmat remediation involved in this project.
- d) If the responsive low bidder intends to utilize an asbestos abatement subcontractor to perform the abatement work, the responsive low bidder must submit an RFAS for an asbestos abatement subcontractor, who attended a site walk-through in the Destructor Plant. Bids will be deemed non-responsive if the Bidder submits a bid without having an authorized representative view the interior.
- e) This walk-through is required for all Bidders who did not attend the voluntary walk-through held on May 7, 2014. Participants of the May 7 walk-through are eligible to attend the May 21st walk-through, but, for them, participation is not mandatory.
- **Assigned Tour Times:** All Bidders must contact John Ziedonis (Telephone: 718-391-2864 E-mail: ziedonijo@ddc.nyc.gov) by Tuesday May 20, 12:00 PM. Bidders must provide their contact information, in order to receive a confirmed walk-through time. Bidders are required to submit their names, along with a copy of the current, valid NYS DOL Asbestos certification. DDC will assign each Bidder a specific one-hour time slot; Bidders will be permitted to enter the site only during their assigned one-hour period. Participants must arrive at least 20 minutes prior to their scheduled tour time in order to verify credentials and prep for entry.
 - **Walk-Through Meeting Location:** Bidders should proceed directly to the tour entry point, entering the site from Gansevoort Street.
 - **Walk-Through Rules:** *Tour size is limited to 2 participants at a time.* Once inside the sealed area participants are not permitted to leave the group; the group will proceed through the spaces together. Those participants who do not follow the rules will be removed from the site.
 - **Required Materials for Bidders:** All Bidders entering the Destructor Plant buildings during the pre-bid walk-through are required to possess:
 - a) A current New York State Department of Labor Asbestos certification, Inspector / Designer/ Handler Certification Level (NYS DOL hard card)
 - b) An operating flashlight. Note that there is currently no reliable light source inside the spaces that are to be visited. A helmet with integral light source is recommended. A powerful light source is recommended.

- c) Personal protective equipment including a full face respirator equipped with P100 cartridges, disposable full-body coveralls, a hard hat, safety glasses, steel toed construction boots, disposable over boots, and disposable gloves.
- d) Due to active DSNY truck traffic, retro-reflective vests are required to be worn by participants while on Gansevoort Peninsula.
- **Decontamination Unit:** A Decon Unit will be located at the entrance/exit to the sealed Destructor Plant. Full decontamination will be required upon exiting the sealed Destructor Plant spaces.
- **Walk-through Waiver:** Participants must sign a waiver, available on site the day of the tour.
- **Parking is not Available:** Vehicular parking for walk-through participants is not available on Gansevoort Peninsula.
- **On-Site Safety Note:** The Gansevoort Peninsula is an active DSNY facility and as such, participants entering the site must exercise caution and care to avoid accidents. Participants must take care and pay attention with regard to vehicular traffic while on the property.

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

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-2200, (718) 391-1283, or by fax at (718) 391-2615.



David Resnick, R.A.
Deputy Commissioner

Name of Bidder

By: _____

DDC PROJECT #: S216-404A

PROJECT NAME: Demolition of DSNY Facilities at Gansevoort Peninsula

ATTACHMENT A - BIDDERS QUESTIONS AND DDC RESPONSES

No.	Bidders Questions	DDC Responses
1	Please provide as-built drawings for buildings and structures to be demolished under this contract.	The MTS and Ramp, Salt Shed, M5 Garage, and Destructor Plant are all to be demolished. The architectural and engineering drawings have been developed indicating this information. A set of reference drawings containing architectural and engineering information for each building has been provided to supplement the contract set; please refer to them. As-built drawings are not available.
2	Please provide the list of attendees at the May 7 th 2014 walk-through.	The list of attendees to the Destructor Plant interior tour on May 7 th 2014 is included in this addendum.
3	Specification Section 31 23 23.13 "Backfill Material Environmental Testing Requirement" is listed on the Table of Contents but not included in Volume 3 of Bid Package. Please provide.	Specification Section 31 23 23.13 Backfill Material Environmental Testing Requirements is included in this addendum.
	We are quoting prices for the referenced project. Given the large scope of work and the upcoming holiday, would you please consider a 2 week delay of the bid date?	A revised Bid Opening Date has been scheduled for June 10th, 2014.
5	The Bid Breakdown form requests information which cannot be compiled without as-built drawings. Please provide as-builts or revised bid breakdown to correspond to data provided by contract documents.	Within the contract documents a set of reference drawings has been included for your use. This along with the architectural and engineering demolition drawings should be sufficient to determine the scope for this project. Refer to page 21 of the Bid Booklet (Volume 1), for Instructions for Preparing Bid Breakdown Bidders should prepare their bids accordingly.
6	Would it be possible to have a walk-through of the DSNY Facilities at Gansevoort Peninsula, as we missed the previous walk-through?	Another site visit is scheduled in this addendum.

DDC PROJECT #: S216-404A

PROJECT NAME: Demolition of DSNY Facilities at Gansevoort Peninsula

ATTACHMENT B – REVISIONS TO THE SPECIFICATIONS

1. Specification Section 31 23 23.13 "Backfill Material Environmental Testing Requirements" is included with this addendum.

DDC PROJECT #: S216-404A

PROJECT NAME: Demolition of DSNY Facilities at Gansevoort Peninsula

ATTACHMENT C – REVISIONS TO THE DRAWINGS

1. **REFER TO DRAWING 3ED-101.00** (Revised and included with this Addendum)
Replace drawing 3ED-101.00 dated 2/28/14 (Issued for Bid) with attached drawing 3ED-101.00 dated 5/13/14.

5/7/14 LIRO ESCORTED GANSEVOORT SITE VISIT

TIME	NAME	COMPANY	PHONE	EMAIL
9:30 *	DON ADLER	LVI	973 277-7235	DADLER@WISESERVICES.COM
	GERRY NUGENT	LVI	914 980 8586	G.NUGENT@LWISSE.COM
	MAREK TOBIASZ	LVI	712-470-4657	MAREK.TOBIASZ@GMAIL.COM
	MIROSLAW FUDRO "NESCO"		718 361-0044	NATIONAL@NESCO.CC
	Wojan Morawski	Pinnacle	201 939 6565	Wmorawski@pinnacle.com
	Richie D'Amico	Pinnacle	201 939 6565	rdamico@pinnacle.com
	Joni Migliaccio	PAL	516 474 2562	Joni@mng-douglas.com
	ARENDIJSZ WISWIKUSZ	PAE	646 772 8323	AREW@USA.COM
	John Doyle	DDC	347 731 3516	doylej@ddc.nyc.ny.us
	DAVID ROBINSON	DDC	718 391 1214	RobinsonD@DDC
	George Kouvakas	KAM	718 729 1447	george.kouvakas@kam.com
	Albert Dickson	Grameray	516-509-9525	adickson@grameray.com
	Jessica Dussan	Grameray	631-431-3043	jdussan@gramerayusa.com
	Juraj Lipbic	ABC	718-729-2501	lipbic@abcecci.com
	Peter Urbanec	ABC	718-729-2501	- 11 -
	ANT MORAW	Russo	718 978 8600	
	Tomasz Sundeja	Russo	917 677 8732	
	MIRAL RISTESKI	APS CONTRACTORS	201 749 7317	MRISTESKI@APSCONTRACTORS.NE
	BOZDAN MIKOV	APS CONTRACTORS	201 879 5310	bozdan.mikov@apscontractors.com
	* SAL RUSSO	A. Russo Wrecking Inc.		

* DID NOT ENTER RESTRICTED ZONES

SECTION 31 23 23.13

BACKFILL MATERIAL ENVIRONMENTAL TESTING REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY:

A. This Section pertains to environmental testing requirements for backfill material for grading and final Site conditions for the project. Excavation work at the Site shall include the site-wide 5-foot excavation, removal of USTs as detailed in Sections 02 61 00 and 02 65 00 of this Specification, and any foundation/utilities removal work required in the Contract documents. Geotechnical and compaction testing requirements are specified in Sections 31 20 00 and 31 23 00.

B. Related Sections include the following:

- | | | |
|----|------------------|--|
| 1. | Section 02 61 00 | Excavation and Removal of Contaminated Soils |
| 2. | Section 02 65 00 | Removal of Underground Storage Tanks |
| 3. | Section 31 20 00 | Earth Moving |
| 4. | Section 31 23 00 | Backfill of Building and Utility Removal Areas |

1.02 SUBMITTALS:

A. Material Test Reports: For each borrow soil material proposed for fill and backfill as follows:

1. Analytical Test Reports: For each borrow soil material proposed for fill, backfill, or cover analytical report from approved environmental laboratory showing that the proposed fill meets the NYSDEC Part 375 Restricted Residential Soil Cleanup Objectives for Target Compound List volatile organic compounds, semi-volatile organic compounds, pesticides, and PCBs and Target Analyte List (TAL) metals. Detection limits shall be equal to or lower than the Part 375 Restricted Residential objectives.
2. Testing results shall be submitted at a frequency of 1 sample per 1,000 cubic yards of backfill material.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS:

A. Backfill materials shall meet NYSDEC Part 375 restricted residential Soil Cleanup Objectives.

PART 3 - EXECUTION

3.01 APPROVAL OF SOURCE MATERIALS

- A. Backfilling shall not proceed without prior approval by the Commissioner of the analytical report from approved environmental laboratory showing that the proposed fill meets the NYSDEC Part 375 Restricted Residential Soil Cleanup Objectives.

END OF SECTION

SYSCA HENNESSY
 A member company of the Syska, Hennessy Group, Inc.
 Syska Hennessy Group, Inc.
 1015 Broadway
 New York, NY 10003
 Tel: 212.691.2500
 Fax: 212.699.3333
 www.sygma.com

ASW ARCHITECTS & ENGINEERS, P.C.
 80 MORTON STREET
 NEW YORK, NEW YORK 10014

LANGAN
 270 Park Avenue
 New York, NY 10017

Life Engineers, Inc.
 A Life Group Company

McLaron
 110 West 42nd Street
 New York, NY 10018

ASSOCIATES
 A CONTRACTING CORPORATION



ASSOCIATES
 A CONTRACTING CORPORATION

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMITS	10/1/00
2	ISSUED FOR CONSTRUCTION	10/1/00
3	ISSUED FOR RECORDS	10/1/00

DPD
 NEW YORK CITY DEPARTMENT OF
 DESIGN & CONSTRUCTION

PUBLIC BUILDINGS
 CAPITAL PROJECT NUMBER
 ST14-00A

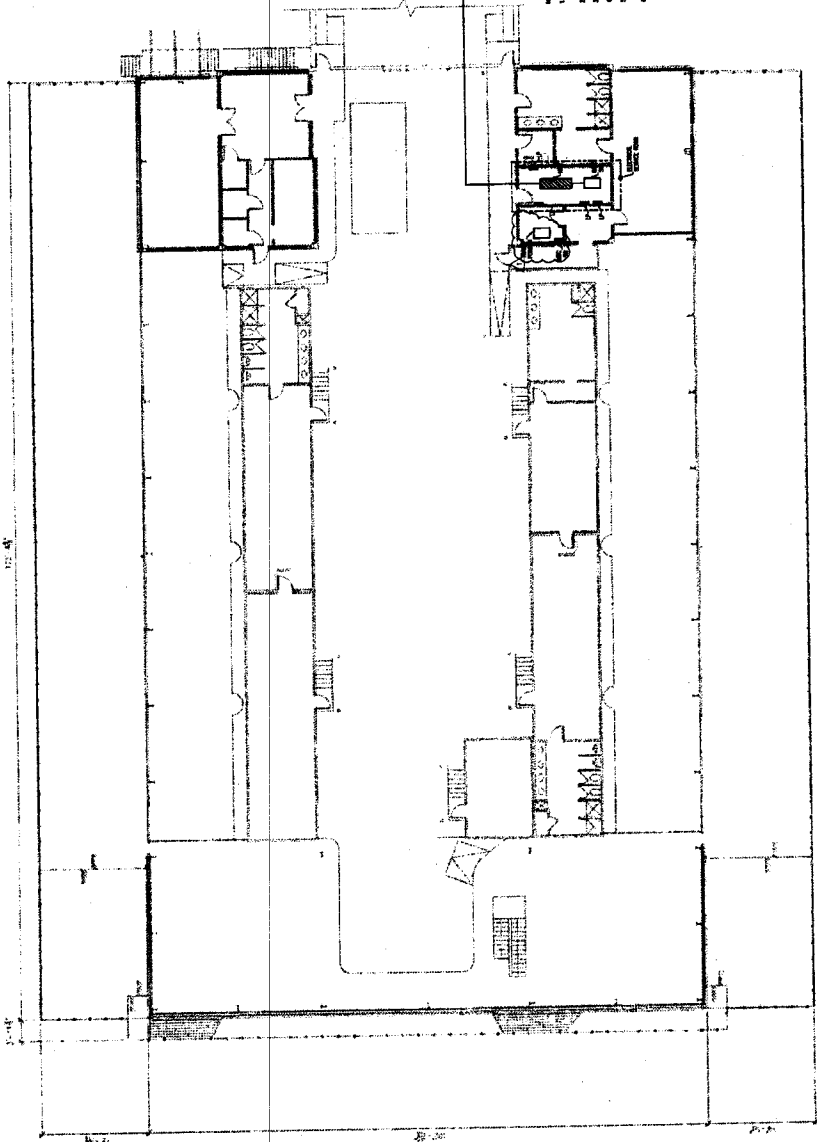
**DEMOLITION OF DSNY
 FACILITIES AT
 GANSEVOORT
 PENINSULA**

**PIER SECOND FLOOR
 ELECTRICAL DEMOLITION PLAN**

DATE: JANUARY 13, 2001
 PROJECT NO.: 00000000
 SHEET NO.: 3ED-101.00
 SCALE: AS SHOWN



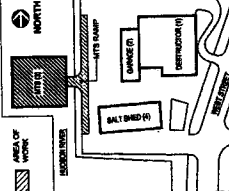
NORTH



NOTES

1. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND THE NEW YORK CITY ELECTRICAL CODE (NYCEC).
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK CITY DEPARTMENT OF DESIGN & CONSTRUCTION (DDC) SPECIFICATIONS FOR ELECTRICAL WORK.
3. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK CITY DEPARTMENT OF DESIGN & CONSTRUCTION (DDC) SPECIFICATIONS FOR DEMOLITION WORK.
4. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK CITY DEPARTMENT OF DESIGN & CONSTRUCTION (DDC) SPECIFICATIONS FOR SAFETY WORK.
5. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK CITY DEPARTMENT OF DESIGN & CONSTRUCTION (DDC) SPECIFICATIONS FOR QUALITY WORK.
6. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH THE NEW YORK CITY DEPARTMENT OF DESIGN & CONSTRUCTION (DDC) SPECIFICATIONS FOR RECORDS WORK.

KEY PLAN



ANNOTATIVE SCALE - 1/8" = 1'-0"

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

May 22, 2014

ADDENDUM No. # 3
FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

S216-404A
Demolition of DSNY Facilities at Gansevoort Peninsula

This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

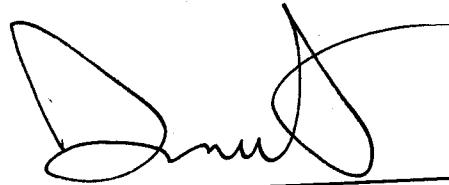
The bidder is advised that the items listed below apply to the project:

1. **Revisions to the Bid Booklet:**

- The bidders are advised that the last day to submit questions is May 27th, 2014 by close of business, 5pm.

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

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-2200, (718) 391-1283, or by fax at (718) 391-2615.



David Resnick, R.A.
Deputy Commissioner

Name of Bidder

By: _____

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

May 28, 2014

ADDENDUM No. # 4

FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

S216-404A

Demolition of DSNY Facilities at Gansevoort Peninsula

This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Bidders Questions and Responses to Questions:**

See Attachment A

2. **Added Reference Drawings (Included with this Addendum):**

The bidders are advised below list of Reference Drawings were inadvertently excluded for those who downloaded the Bid Documents on the DDC website.

For bidders who picked up a hardcopy of the Bid Documents, below list of Reference Drawings were included in their set.

REFERENCE DRAWINGS

0G-000	GENERAL REFERENCE DRAWING COVERSHEET
1AR-102	DESTRUCTOR PLANT. OPERATOR FLOOR PLAN. (REFERENCE DRAWING)
1AR-103	DESTRUCTOR PLANT. STORAGE ROOM FLOOR PLAN. (REFERENCE DRAWING)
1AR-104	DESTRUCTOR PLANT. ROOF PLAN. (REFERENCE DRAWING)
1AR-201	DESTRUCTOR PLANT. EAST ELEVATION. (REFERENCE DRAWING)
1AR-202	DESTRUCTOR PLANT. SOUTH & WEST ELEVATIONS. (REFERENCE DRAWING)
1AR-203	DESTRUCTOR PLANT. NORTH ELEVATION. (REFERENCE DRAWING)
1AR-301	DESTRUCTOR PLANT. SECTIONS "A-A" & "B-B". (REFERENCE DRAWING)
1AR-302	DESTRUCTOR PLANT. SECTIONS "C-C", "D-D" & "E-E". (REFERENCE DRAWING)
1AR-303	DESTRUCTOR PLANT. SECTIONS "F-F" & "G-G". (REFERENCE DRAWING)
2AR-101	DESTRUCTOR PLANT. GARAGE & FACILITY FIRST FLOOR PLAN. (REFERENCE DRAWING)
2AR-102	DESTRUCTOR PLANT. GARAGE & FACILITY SECOND FLOOR PLAN. (REFERENCE DRAWING)
2AR-103	DESTRUCTOR PLANT. GARAGE & FACILITY ROOF PLAN. (REFERENCE DRAWING)
2AR-201	DESTRUCTOR PLANT. GARAGE & FACILITY ELEVATIONS. (REFERENCE DRAWING)
2AR-301	DESTRUCTOR PLANT. GARAGE & FACILITY SECTIONS. (REFERENCE DRAWING)
3AR-101	MTS. PIER LEVEL FLOOR PLAN. (REFERENCE DRAWING)
3AR-102	MTS. TIPPING FLOOR PLAN. (REFERENCE DRAWING)

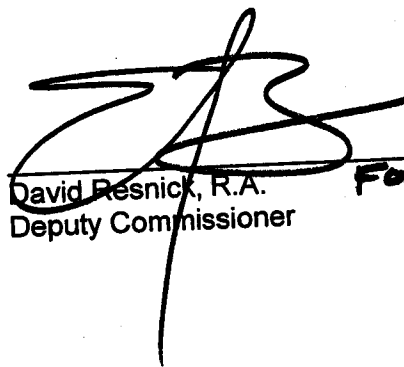
3AR-103	MTS. ROOF PLAN. (REFERENCE DRAWING)
3AR-201	MTS. SOUTH & NORTH ELEVATIONS. (REFERENCE DRAWING)
3AR-202	MTS. EAST & WEST ELEVATIONS. (REFERENCE DRAWING)
3AR-203	MTS. SOUTH ELEVATION. (REFERENCE DRAWING)
3AR-301	MTS. SECTIONS "A-A" & "B-B". (REFERENCE DRAWING)
4AR-101	SALT SHED. FLOOR PLAN, SECTION & ELEVATION. (REFERENCE DRAWING)
1SR-101	REFERENCE DRAWING DESTRUCTOR PLANT FOUNDATION & PILE PLAN
1SR-102	REFERENCE DRAWING DESTRUCTOR PLANT TIPPING & ASH REMOVAL FLOOR FRAMING PLANS
1SR-103	REFERENCE DRAWING DESTRUCTOR PLANT OPERATING FLOOR PLAN
1SR-104	REFERENCE DRAWING DESTRUCTOR PLANT LOW ROOF AND STORAGE ROOM PLAN
1SR-105	REFERENCE DRAWING DESTRUCTOR PLANT HIGH ROOF AND CHARGING FLOOR PLAN
1SR-106	REFERENCE DRAWING DESTRUCTOR PLANT FURNACE ROOM ROOF & CLEAR STORY PLAN
1SR-300	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 1
1SR-301	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 2
1SR-302	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 3
1SR-303	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 4
1SR-304	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 5
1SR-305	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 6
1SR-306	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 7
1SR-307	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 8
1SR-308	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 9
1SR-309	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 10
1SR-310	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 11
1SR-311	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 12
1SR-312	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 13
1SR-313	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 14
1SR-314	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 15
1SR-315	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 16
1SR-316	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 17
1SR-317	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 18
1SR-318	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 19
1SR-319	REFERENCE DRAWING DESTRUCTOR PLANT DETAILS - 20
2SR-101	REFERENCE DRAWING M5 GARAGE PILE AND PILE CAP PLAN
2SR-102	REFERENCE DRAWING M5 GARAGE FOUNDATION PLAN
2SR-103	REFERENCE DRAWING M5 GARAGE SECOND FLOOR/LOW ROOF FRAMING PLAN
2SR-104	REFERENCE DRAWING M5 GARAGE HIGH ROOF FRAMING PLAN
2SR-105	REFERENCE DRAWING M5 GARAGE SMOKESTACKS DEMOLITION PLAN
2SR-200	REFERENCE DRAWING M5 GARAGE DETAILS - 1
2SR-201	REFERENCE DRAWING M5 GARAGE DETAILS - 2
2SR-202	REFERENCE DRAWING M5 GARAGE DETAILS - 3
2SR-203	REFERENCE DRAWING M5 GARAGE DETAILS - 4
2SR-204	REFERENCE DRAWING M5 GARAGE DETAILS - 5
2SR-205	REFERENCE DRAWING M5 GARAGE DETAILS - 6
2SR-206	REFERENCE DRAWING M5 GARAGE DETAILS - 7
2SR-207	REFERENCE DRAWING M5 GARAGE DETAILS - 8
2SR-208	REFERENCE DRAWING M5 GARAGE DETAILS - 9
2SR-209	REFERENCE DRAWING M5 GARAGE DETAILS - 10
2SR-210	REFERENCE DRAWING M5 GARAGE DETAILS - 11
2SR-211	REFERENCE DRAWING M5 GARAGE DETAILS - 12
2SR-212	REFERENCE DRAWING M5 GARAGE DETAILS - 13
3SR-101	REFERENCE DRAWING MTS PIER FOUNDATION PLAN
3SR-102	REFERENCE DRAWING MTS PIER PLAN
3SR-103	REFERENCE DRAWING MTS FLOOR FRAMING PLAN & DETAILS
3SR-104	REFERENCE DRAWING MTS ROOF FRAMING PLAN
3SR-301	REFERENCE DRAWING MTS RAMP FOUNDATION PLAN
3SR-302	REFERENCE DRAWING MTS RAMP FRAMING PLAN

3SR-400	REFERENCE DRAWING MTS DETAILS - 1
3SR-401	REFERENCE DRAWING MTS DETAILS - 2
3SR-402	REFERENCE DRAWING MTS DETAILS - 3
3SR-403	REFERENCE DRAWING MTS DETAILS - 4
3SR-404	REFERENCE DRAWING MTS DETAILS - 5
3SR-405	REFERENCE DRAWING MTS DETAILS - 6
3SR-406	REFERENCE DRAWING MTS DETAILS - 7
3SR-407	REFERENCE DRAWING MTS DETAILS - 8
3SR-408	REFERENCE DRAWING MTS DETAILS - 9
3SR-409	REFERENCE DRAWING MTS DETAILS - 10
3SR-410	REFERENCE DRAWING MTS DETAILS - 11
3SR-411	REFERENCE DRAWING MTS DETAILS - 12
3SR-412	REFERENCE DRAWING MTS DETAILS - 13
3SR-413	REFERENCE DRAWING MTS DETAILS - 14
3SR-414	REFERENCE DRAWING MTS DETAILS - 15
3SR-415	REFERENCE DRAWING MTS DETAILS - 16
3SR-416	REFERENCE DRAWING MTS DETAILS - 17
3SR-417	REFERENCE DRAWING MTS DETAILS - 18
3SR-418	REFERENCE DRAWING MTS DETAILS - 19
3SR-419	REFERENCE DRAWING MTS DETAILS - 20
3SR-420	REFERENCE DRAWING MTS DETAILS - 21
3SR-421	REFERENCE DRAWING MTS DETAILS - 22
3SR-422	REFERENCE DRAWING MTS DETAILS - 23
3SR-423	REFERENCE DRAWING MTS DETAILS - 24
4SR-200	REFERENCE DRAWING SALT SHED PLAN & DETAILS
4SR-201	REFERENCE DRAWING SALT SHED ELEVATIONS & DETAILS
1MR-101.00	HEATING & VENTILATION ASH HANDLING FLOOR PLAN
1MR-102.00	HEATING & VENTILATION BOILER ROOM PLAN & SECTIONS
1MR-103.00	HEATING & VENTILATION FUELOIL SYSTEMS & DETAILS
1MR-104.00	HEATING & VENTILATION OPERATING FLOOR PLAN - REFERENCE DRAWING
1MR-105.00	HEATING & VENTILATION RISER DIAGRAM - STEAM LINE TO PIER
2MR-100.00	ABBREVIATIONS AND SYMBOLS - REFERENCE DRAWING
2MR-101.00	FIRST FLOOR PLAN - REFERENCE DRAWING
2MR-102.00	FIRST FLOOR PLAN- REFLECTED CEILING PLAN - REFERENCE DRAWING
2MR-103.00	SECOND FLOOR PLAN - REFERENCE DRAWING
2MR-104.00	SECOND FLOOR PLAN - REFLECTED CEILING PLAN - REFERENCE DRAWING
2MR-105.00	ROOF PLAN - REFERENCE DRAWING
2MR-106.00	VEHICLE EXHAUST SYSTEM FIRST FLOOR PLAN- REFERENCE DRAWING
2MR-107.00	EQUIPMENT SCHEDULES AND GENERAL NOTES - REFERENCE DRAWING
2MR-108.00	DETAILS - REFERENCE DRAWING
2MR-109.00	AIR FLOW DIAGRAMS - REFERENCE DRAWING
3MR-101.00	TRAILER HVAC PLANS - REFERENCE DRAWING
3MR-102.00	TRAILER HVAC SCHEDULES - REFERENCE DRAWING
1ER-101.00	SINGLE LINE DIAGRAM - REFERENCE DRAWING
1ER-111.00	DETAILS - REFERENCE DRAWING
1ER-112.00	OPERATING FLOOR PLAN - REFERENCE DRAWING
2ER-101.00	ELECTRICAL AND CONTROL SCHEMATIC - REFERENCE DRAWING
2ER-102.00	ONE LINE DIAGRAM - REFERENCE DRAWING
2ER-103.00	SCHEMATIC DIAGRAMS - REFERENCE DRAWING
2ER-104.00	FIRST FLOOR POWER AND LIGHTING PLAN - REFERENCE DRAWING
2ER-105.00	SECOND FLOOR POWER AND LIGHTING PLAN - REFERENCE DRAWING
2ER-106.00	ROOF POWER PLAN - REFERENCE DRAWING
2ER-107.00	PANEL BOARD SCHEDULES - REFERENCE DRAWING
2ER-108.00	LIGHTING FIXTURE SCHEDULE, CABLE & CONDUIT SCHEDULE - REFERENCE
3ER-101.00	FLOOR PLAN - REFERENCE DRAWING
3ER-102.00	TRAILER ELECTRICAL PLAN - REFERENCE DRAWING
3ER-103.00	SYMBOLS AND SCHEDULES - REFERENCE DRAWING
3ER-104.00	LIGHTING PLAN - REFERENCE DRAWING
3ER-105.00	POWER PLAN - REFERENCE DRAWING

3ER-106.00	RISER DIAGRAM, REMOVAL AND HEAT TRACING - REFERENCE DRAWING
3ER-107.00	SWITCHBOARD AND DIAGRAMS - REFERENCE DRAWING
3ER-108.00	ELECTRICAL WORK DISPOSABLE PIER LIGHTING - REFERENCE DRAWING
3ER-109.00	SERVICE WALKWAYS - LIGHTING - REFERENCE DRAWING
3ER-110.00	GANSEVOORT ST MTS PLANS & SCHEMATIC - REFERENCE DRAWING
4ER-101.00	SALT SHED ELECTRICAL PLAN - REFERENCE DRAWING
4ER-102.00	SALT SHED SYMBOLE AND SCHEDULE - REFERENCE DRAWING
2PR-101.00	BELOW FIRST FLOOR PLAN - REFERENCE DRAWING
2PR-102.00	FIRST FLOOR PLAN - REFERENCE DRAWING
2PR-103.00	SECOND FLOOR PLAN - REFERENCE DRAWING
2PR-104.00	PLUMBING ROOF PLAN - REFERENCE DRAWING
2PR-105.00	FIRST FLOOR ENLARGED PARTIAL PLAN - REFERENCE DRAWING
2PR-106.00	SECOND FLOOR ENLARGED PARTIAL PLAN - REFERENCE DRAWING

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

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-2200, (718) 391-1283, or by fax at (718) 391-2615.


 David Resnick, R.A. For DR.
 Deputy Commissioner

 Name of Bidder

By: _____

DDC PROJECT #: S216-404A

PROJECT NAME: Demolition of DSNY Facilities at Gansevoort Peninsula

ATTACHMENT A - BIDDERS QUESTIONS AND DDC RESPONSES

No.	Bidders Questions	DDC Responses
1	Please provide the amount of rodent bait stations needed. What are the measurements around the demolition? What is the demolition duration?	DDC does not provide rodent control quantity requirements in the bid documents. This determination is the responsibility of the Contractor. For this project, rodent and insect control is required and the requirements are listed in DDC General Conditions. Please refer to them and be guided accordingly. Project duration is provided in the Schedule A of the Addendum to General Conditions (Volume 3 of 3).
2	We would like to ask for permission to visit the site via small water craft to take soundings. Please advise if this is possible.	DDC does not permit bidders to perform tests on projects on which they are bidding. There are existing sections in the McLaren documents that provide ranges for the mudline depths directly adjacent to the bulkhead. Also the Tectonic survey includes spot shot elevations of the existing mudline directly outboard of the bulkhead. Please utilize ALL bid documents provided.
3	Please clarify what the RFAS form is, referred to in Addendum #2?	RFAS form is DDC's <i>Request for Approval Subcontractor</i> form. This form is to be completed by the lowest successful bidder identifying the qualifications of their subcontractors.
4	Please provide a list of the attendees for May 21 st walk-through?	The sign-in sheet for the May 21 st walk-through is included with this addendum.
5	Please provide the Bid Breakdown Forms in Excel format.	The Bid Breakdown in Excel format is not available to Bidders.
6	Since the MTS is a pier based structure can a marine contractor who does not have a DOB demolition permit (license) perform the work?	The Contractor is required to have all Federal, State and City permits, authorizations and approvals necessary to perform the work presented in the bid documents, issued by authorities having jurisdiction over the work.

7	<p>Refer to Page 7 of 42 Addendum to the General Conditions. "Carpet must be cut, rolled and placed in a closed trailer for the carpet reclamation agency." Will this level of recycling be required? Will the carpet reclamation agency be provided by others? Or are all disposals of C&D materials to be handled by the contractor in a legal manner not necessarily the means and methods depicted for recycling. This question is in regards to all items ie. Wood materials, metals, asphalt shingle roofing, gypsum board, etc.</p>	<p>Contractor is required to comply with all bid documents as specified.</p> <p>This level of recycling is required. The contractor is responsible for all aspects of the recycling process. It should be noted that debris removed from the contaminated areas of the destructor plant (furnace room, ash conveyor room or Boiler room) shall be handled and disposed of as asbestos and metals contaminated wastes as specified.</p>
8	<p>Please clarify if security guards are to be present 24/7/365 or only during non-working hours.</p>	<p>Please refer to the Addendum to the General Conditions and DDC General Conditions Section 015000 Temporary Facilities, Services and Controls, Sub-Section 3.18 for Security Guards requirement.</p>
9	<p>Reference Specification Section 028013 Allowance for Incidental Asbestos Abatement. Does this section apply? Do we carry the allowance in our bid?</p>	<p>Yes, Specification Section 028013 Allowance for Incidental Asbestos Abatement applies. Refer to the (Volume 1 of 3) Bid Booklet Page 13 Bid Form.</p>
10	<p>Please advise if the project has been filed with DOB? What is the status?</p>	<p>The project has been filed with DOB; MEP demolition and Sprinkler applications have been approved for all structures. Architectural and Structural demolition documents have been submitted to the BEST Squad. Contractor is responsible for all required filings to procure demolition permit.</p> <p>Bidders can review DOB paperwork online at the DOB website under the address: 2 Bloomfield Street, Manhattan.</p> <p>SBS filing for new bulkhead construction has been approved.</p>
11	<p>When were the current DSNY buildings built?</p>	<p>Refer to drawing dates on the Reference Drawings for each of the buildings. The DSNY Destructor Plant, MTS and MTS ramp were constructed in the 1950's. The Salt Shed was refurbished in the early 1990's. Garage M5 was constructed in the early 2000's.</p>

12	What occupied the site previously?	Refer to the historic Sanborn maps in the Appendices for information regarding the site previous to construction of DSNY facilities. The Gansevoort Peninsula, prior to DSNY facility construction, was the ten block site of Gansevoort Market.
13	Please provide information for the Destructor Plant stacks?	The stacks were removed during construction of Garage M5. See Reference Drawings, the stack foundations are still in place and require removal during this demolition project.
14	Is the Contractor required to follow the phasing plans in the bid set, or can the Contractor propose a revised phasing plan?	The suggested Phasing Plans, developed by the design team, are just that: suggested phasing plans. The contractor is required to develop a phasing plan based on an understanding of the project. Project phasing during demolition will require coordination with DSNY, FDNY and Hudson River Park Trust activities and subject to Commissioner's approval.
15	Please provide information on the activity for the FDNY facility?	FDNY Marine 1 Pier is active on the site 24/7, 365 days a year. It is imperative that the successful bidder coordinate demolition activities with FDNY activities, both on land and in the water, and provide uninterrupted access from Route 9A to the FDNY pier facility.
16	Is there a buffer zone between FDNY and DSNY as far as bringing barges in for the Demo?	Demolition work in the water must not interfere with FDNY boat access and operation. Please refer to Specification 020100 Protection of Existing Facilities and Drawings G.102-A through G.102-E.

GANSEVOORT SIGN IN 5/21/14

<u>NAME</u>	<u>COMPANY</u>	<u>PHONE</u>	<u>EMAIL</u>
Dean Devoe	Tully Construction	718 446 7000 x298	ddevoe@tullyenvironmental.com
DAMEN Flemming	I.A.R.	917 660 1808	dflemmings@iaronline.com
Robert Lewis	Gramercy Group Inc	646 294 7224	RLewis@GramercyUSA.com
Danny Garcia	Gramercy Group Inc	551 691 4838	DGARCIA@GRAMERCYUSA.COM
Albert Dickson	Gramercy Group Inc	516 509 9523	adickson@gramercyusa.com
Mark Morissey	Pinnacle	201 939 6565	mmorisse@pinnacle.com
Midie Doran	Pinnacle	201 939 6565	rdoran@pinnacle.com
MARCE WITCZKA	NESCO	646 208 9455	M-FUDIZO 347 885 0103 JRIVERA@NESCO-CC
John Day Jr	DDC	718-391-1405	jdylejo@ddc.nyc.gov
Eddie Tang	DDC	718-391-1927	Tanged@ddc.nyc.gov
Peter Wille	ATL	718.439.0925	peterw@airtechlab.com
CZ. JAGIELO	ATL	- - -	
Jose Rellio	UNITEch services group	718 886 8474	Jose @ UNITEch Services Group
SAM DACHEN	COLE PARTNERS INC.	718 875 - 8300	SDACHEN@COLEPARTNERS.COM
MARK TOBIAS	LV1	212-470-4657	MAREK.TOSI@LV1.COM
GERARD NUGENT	LV2	914-980-8586	GNUGENT@LV2SERVICES.COM
Orlando Caprio	U-S Environmental	800 300 8734	USE@verizon.net

SIGN IN GANSEVOORT

SITE

NAME

COMPANY

PHONE

EMAIL

Sen Russo Jr

Russo

516 315 3210

russodemo@ymail.com

THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

June 3, 2014

ADDENDUM No. # 5
FOR FURNISHING ALL LABOR AND MATERIAL NECESSARY AND REQUIRED FOR:

S216-404A
Demolition of DSNY Facilities at Gansevoort Peninsula

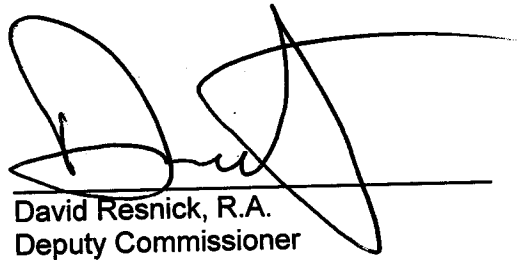
This addendum is issued for the purpose of amending the requirements of the Bid and Contract Documents and is hereby made a part of said Bid and Contract Documents to the same extent as though it were originally included therein.

The bidder is advised that the items listed below apply to the project:

1. **Bidders Questions and Responses to Questions:**
See Attachment A

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

If additional information is required, please contact the Department of Design and Construction, Contract Section at (718) 391-2200, (718) 391-1283, or by fax at (718) 391-2615.



David Resnick, R.A.
Deputy Commissioner

Name of Bidder

By: _____

DDC PROJECT #: S216-404A

PROJECT NAME: Demolition of DSNY Facilities at Gansevoort Peninsula

ATTACHMENT A – BIDDERS QUESTIONS AND DDC RESPONSES

No.	Bidders Questions	DDC Responses
	The DDC response to Question #1 below has been revised from Addendum #4.	
1	We would like to ask for permission to visit the site via small water craft to take soundings. Please advise if this is possible.	<p>The bid documents contain Hudson River mudline depth information. There are existing sections in the McLaren documents that provide ranges for the mudline depths directly adjacent to the bulkhead. Also the Tectonic survey includes spot shot elevations of the existing mudline directly outboard of the bulkhead.</p> <p>Additionally, included in the Bid Documents in Appendix 4 are test borings made prior to construction of the existing MTS and Destructor Plant, as well as historical Sanborn Maps which provide historical site condition information at both the peninsula and in the Hudson River prior to construction of the DSNY facilities.</p> <p>Please utilize ALL bid documents provided.</p>
2.	Would it be possible to postpone the Bid Opening Date of June 10, 2014?	No.
3.	Please confirm Builders Risk Insurance Policy is required for this project – as there is no New Construction being performed and this is Demolition project.	<p>Construction of the New Bulkhead is New Construction.</p> <p>As per Schedule A of the Addendum to the General Conditions, Builder's Risk Insurance Requirements apply for this project.</p>



THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS

ADDENDUM TO THE GENERAL CONDITIONS
FOR SINGLE CONTRACT PROJECTS

The General Conditions are hereby amended in accordance
with the terms and conditions set forth in this Addendum.

I. PROJECT DESCRIPTION

FMS #: S216-404A

PROJECT NAME: *Demolition of DSNY Facilities at Gansevoort Peninsula*

PROJECT DESCRIPTION: *This Project consists of the demolition and remediation all DSNY buildings on the Gansevoort peninsula, and remediation of the existing soil to be replaced by new fill. The DSNY buildings to be demolished consist of the Destructor Plant, the M5 Garage, a Salt Shed, and a Marine Transfer Station. The Marine Transfer Station pier will also be demolished as part of the project. The existing FDNY Marine One pier will remain and be fully operational throughout the project.*

PROJECT LOCATION: *Gansevoort Peninsula located west of Route 9A and between Bloomfied St. and Gansevoort St.*

BOROUGH: *Manhattan*

CITY OF NEW YORK

ZIP CODE: *10014*

COMMUNITY BOARD #: *102*

LANDMARK STATUS:

DESIGNATED LANDMARK STRUCTURE OR SITE: *No*

If this is a Designated Landmark Structure or Site, Section 01 3591, Historic Treatment Procedures applies to this project.

LANDMARK QUALITY STRUCTURE: *No*

If this is a Landmark Quality Structure, Section 01 3591, Historic Treatment Procedures applies to this project.

II. LEED GREEN BUILDING REQUIREMENTS

Not Used.

III. COMMISSIONING REQUIREMENTS

Not Used.

IV. PROJECT MANAGEMENT

- DDC shall publicly bid and enter into all contracts for the Project. DDC shall manage the Project using its own personnel.
- DDC shall publicly bid and enter into all contracts for the Project. A Construction Management firm (the "CM") hired by DDC shall manage the Project. The Contractor is advised that the CM shall serve as the representative of the Commissioner at the site and shall, subject to review by the Commissioner, be responsible for the inspection, management, coordination and administration of the required construction work, as delineated in the article of the Standard Construction Contract entitled "The Resident Engineer".

V. CONTRACTS FOR THE PROJECT

The Project consists of a single contract, the Contract for General Construction Work. The Contractor for General Construction Work is responsible for the performance of all required work for the Project as set forth in the Contract Documents (General Conditions, Drawings and Specifications), including all responsibilities and obligations assigned to separate Contractors for the following subdivisions of the work: Plumbing Work, HVAC Work, and Electrical Work. All responsibilities and obligations in the Contract Documents assigned to separate Contractors for such subdivisions of the work are the responsibility of the Contractor for General Construction Work.

VI. SCHEDULES

The Contractor is advised that Schedules A through F are attached to, and incorporated as part of, this Addendum to the General Conditions. These schedules contain important information that is specific to this Project. The Contractor is advised to carefully review these schedules.

VII. APPLICABILITY OF SECTIONS/SUB-SECTIONS AND AMENDED SUB-SECTIONS

The Contractor is advised that various Sections/Sub-Sections in the General Conditions may not apply to this Project or may apply as amended. Such Sections/Sub-Sections advise the Contractor to "Refer to the Addendum for the applicability of this Section/Sub-Section." Such Sections/Sub-Sections are set forth below. A check mark indicates whether the Section/Sub-Section (1) applies to the Project, (2) does not apply to the Project, or (3) applies to the Project as amended. If no box is checked, the Section/Sub-Section, as set forth in the General Conditions, applies to the Project. Amended Sections/Sub-Sections, if any, are set for the following this list of Sections.

<u>Section</u>	<u>Sub-Section</u>	<u>Sub-Section</u>	<u>Applies</u>	<u>Does not Apply</u>	<u>Applies as Amended</u>
01 1000	1.4 (B)	Scope and Intent / LEED		X	
	1.4(C)	Scope and Intent / Commissioning		X	
01 3233		Photographic Documentation	X		
01 3300	1.7 (A-D)	LEED Submittals		X	
01 3503		General Mechanical Requirements		X	
01 3506	3.2 (A-B)	Electrical Conduit System Including Boxes (Pull, Junction and Outlet)		X	
	3.3 (A-E)	Electrical Wiring Devices		X	
	3.4 (A-I)	Electrical Conductors and Terminations		X	
	3.5 (A-B)	Circuit Protective Devices		X	
	3.6 (A-J)	Distribution Centers		X	
	3.7 (A-I)	Motors		X	
	3.8 (A-I)	Motor Control Equipment		X	
01 3526	1.3 (A)	Related Sections			X
01 3591		Historic Treatment Procedures		X	
01 5000	3.2 (A)	Temporary Water Facilities / Temporary Water		X	
	3.2 (B)	Temporary Water Facilities / Temporary Water – Work in Existing Facilities	X		
	3.3 (B)	Temporary Sanitary Facilities / Self-Contained Toilet Units	X		
	3.3 (C)	Temporary Sanitary Facilities / Existing Toilets		X	
	3.4 (B) 1	Temporary Power, Lighting, and Site Lighting / Connection to Utility Lines	X		

<u>Section</u>	<u>Sub-Section</u>	<u>Sub-Section</u>	<u>Applies</u>	<u>Does not Apply</u>	<u>Applies as Amended</u>
01 5000	3.4 (B) 2	Temporary Power, Lighting, and Site Lighting / Connection to Existing Electrical Power Service	X		
	3.4 (B) 3	Temporary Power, Lighting, and Site Lighting / Electrical Generator Power Service	X		
	3.4 (D)	Temporary Power, Lighting, and Site Lighting / Temporary Lighting			X
	3.4 (E)	Temporary Power, Lighting, and Site Lighting / Site Security Lighting (for New Construction Only)		X	
	3.5 (A-J)	Temporary Heat	X		
	3.8 (A)	DDC Field Office / Office Space in Existing Building		X	
	3.8 (B)	DDC Field Office / DDC Field Office Trailer	X		
	3.8 (B-3a)	DDC Field Office / DDC Managed Field Office Trailer		X	
	3.8 (B-3b)	DDC Field Office / CM Managed Field Office Trailer	X		
	3.8 (D)	DDC Field Office / Additional Equipment for the DDC Field Office	X		
	3.13(A-D)	Work Fence Enclosure	X		
	3.17(B)	Project Rendering		X	
	3.18 (A-C)	Security Guards / Fire Guards on Site	X		
01 5411	3.1 (A-J)	Temporary Use, Operation and Maintenance of Elevators During Construction for New Buildings Up To and Including 15 Stories		X	
	3.2 (A-M)	Temporary Use, Operation and Maintenance of Elevators During Construction for New Buildings Over 15 Stories		X	
	3.3 (A-E)	Temporary Use, Operation and Maintenance of Elevators During Construction for Existing Buildings		X	
01 7300	3.3 (A-I)	Surveys	X		
	3.4 (A-B)	Borings	X		
	3.12 (A-D)	Sleeves and Hangers		X	
	3.13 (A)	Sleeve and Penetration Drawings		X	
	3.15 (A)	Location of Partitions		X	
01 7419	1.5 (C)	Waste Management Performance Requirements / LEED Certification		X	
01 7900		Demonstration and Owner's Pre-Acceptance Orientation		X	
	3.2 (A)	Non-Commissioned Projects		X	
	3.2 (B)	Commissioned Projects		X	
01 8113		Sustainable Design Requirements for LEED Buildings		X	
01 8113.13		VOC Limits for Adhesives, Sealants, Paints and Coatings for LEED Buildings		X	
01 8119		Indoor Air Quality Requirements for LEED Buildings		X	
01 9113		General Commissioning Requirements		X	

AMENDED SECTIONS/SUB-SECTIONS

The Contractor is advised that the amended Sub-Sections set forth below are included in the General Conditions and apply to the Project.

1. **Section 013526 – Article 1.3 (A)**

ADD SUB-SECTION –

“1.3 RELATED SECTIONS

A. SECTION 01 39 20 HEALTH AND SAFETY”

ADDITIONAL SECTIONS/SUB-SECTIONS

1. **Section 011000 – Add the following Sub-Section 1.13**

1.13 **WORK RESTRICTIONS**

- A. Pedestrian and vehicular traffic along HRFT Greenway to be preserved as per Specification Section 02035 and Drawing CD200.
- B. Vehicle engine idling is prohibited in accordance with RCNY Title 34 Chapter 4, Section 4-08(p)(1).
- C. The use of ultra-low sulfur diesel fuel to be in compliance with Local Law 77 of 2008.

2. **Section 017419 – Add the following Sub-Sections 3.2, 3.3, 3.4, 3.5, and 3.6**

3.2 **SALVAGING DEMOLITION WASTE**

a. Salvaged Items for Reuse in the Work:

- i. Clean salvaged items.
- ii. Pack or crate items after cleaning. Identify contents of containers.
- iii. Store items in a secure area until installation.
- iv. Protect items from damage during transport and storage.
- v. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

b. Salvaged Items for Owner's Use:

- i. Clean salvaged items.
- ii. Pack or crate items after cleaning. Identify contents of containers.

- iii. Store items in a secure area until delivery to Owner.
 - iv. Transport items to Owner's storage area designated by Owner.
 - v. Protect items from damage during transport and storage.
- c. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.

3.3 RECYCLING DEMOLITION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- d. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
- i. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - 1. Inspect containers and bins for contamination and remove contaminated materials if found.
 - ii. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - iii. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - iv. Store components off the ground and protect from the weather.
 - v. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

- A. Asphaltic Concrete Paving: Grind asphalt to maximum 4-inch size.
- vi. Crush asphaltic concrete paving and screen to comply with requirements in Division 31 Section "Earth Moving" for use as general fill.
- e. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- f. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
- i. Pulverize concrete to maximum 4-inch size.
 - ii. Crush concrete and screen to comply with requirements in Division 31 Section "Earth Moving" for use as satisfactory soil for fill or subbase.

- g. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 - i. Pulverize masonry to maximum 4-inch size.
 - 1. Crush masonry and screen to comply with requirements in Division 31 Section "Earth Moving" for use as general fill.
 - 2. Crush masonry and screen to comply with requirements in Division 32 Section "Plants" for use as mineral mulch.
 - ii. Clean and stack undamaged, whole masonry units on wood pallets.
- h. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- i. Metals: Separate metals by type.
 - i. Structural Steel: Stack members according to size, type of member, and length.
 - ii. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- j. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- k. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- l. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
 - i. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.
- m. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
 - i. Store clean, dry carpet in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
- n. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
- o. Plumbing Fixtures: Separate by type and size.
- p. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- q. Lighting Fixtures: Separate lamps by type and protect from breakage.

- r. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.
- s. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

- a. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
- b. Polystyrene Packaging: Separate and bag materials.
- c. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
- d. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- e. Site-Clearing Wastes: Chip brush, branches, and trees.
 - i. Comply with requirements in Division 32 Section "Plants" for use of chipped organic waste as organic mulch.
- f. Wood Materials:
 - i. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - ii. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
 - 1. Comply with requirements in Division 32 Section "Plants." for use of clean sawdust as organic mulch.
- g. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - i. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.
 - 1. Comply with requirements in Division 32 Section "Plants." for use of clean ground gypsum board as inorganic soil amendment.

3.6 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

- i. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
- ii. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

- a. Burning: Do not burn waste materials.

- b. Retain paragraph below if disposal is permitted on Owner's property; revise, if applicable, to indicate limits on type of materials that may be disposed of on-site.

- c. Disposal: Transport waste materials off Owner's property and legally dispose of them.

3. **Section 017419 – ADD Article 1.5 (G)**

In addition to the items listed in 1.5 (D) include the following:

1. Site-clearing waste
2. Stone cobbles
3. Clay tile
4. Clean timber
5. Wood sheet materials
6. Translucent wall panels
7. Glass and glazing
8. Piping, supports and hangers
9. Electrical conduit and copper wire
10. Mechanical equipment
11. Electrical equipment (e.g. switchgear, panelboards, transformers)
12. Miscellaneous equipment
13. Appliances

4. **Section 017419 – ADD Article 1.5 (H)**

H. In addition to the items listed in 1.5 (E) above include ballasts in the list of items to be recycled.

5. **Section 017419 – ADD Article 1.7 (G)**

G. In addition to the criteria described in 1.7 (B.2) the contractor shall also provide documentation for the latest annual recycling report to the New York State Department of Environmental Conservation pursuant to 6NYCRR Part 360 regulations, or a letter containing the same information if the report is not available. Contractor shall save such original documents (as above) for the life of the project plus three years.

VIII. SPECIAL EXPERIENCE REQUIREMENTS FOR THE PROJECT

NOT USED

IX. REVISIONS: SPECIFICATIONS AND CONTRACT DRAWINGS

The Specifications and the Contract Drawings for the Project are revised in accordance with the provisions set forth below.

- (1) Owner: Wherever the term "Owner" is used in the Specifications and/or the Contract Drawings, such term shall mean the City of New York.
- (2) Other Entities: In the event any entity other than the City of New York is referred to or named as the "Owner" in the Specifications and/or the Contract Drawings, the name of such other entity is deemed deleted and replaced with the "City of New York".
- (3) Architect / Engineer: Wherever the words "Architect", "Engineer", "Architect / Engineer" or "Architect and/or Engineer" are used in the Specifications and/or the Contract Drawings, such words are deemed deleted and replaced with the word "Commissioner".
- (4) Products / Manufacturers: Wherever the Specifications and/or the Contract Drawings require the contractor to provide a particular product (i.e., material and/or equipment) from a designated manufacturer and/or vendor, the term "or approved equal" is deemed inserted, even if only one product and/or manufacturer is specified, except as otherwise provided below.
 - (a) Proprietary Items: If the Bid Booklet contains a Notice which identifies a particular product from a designated manufacturer as a "Proprietary Item", the Contractor shall be required to provide such specified product. In such case, no substitution or "approved equal" will be permitted.
- (5) Special Experience Requirements: Special Experience Requirements for the Project, if any, are set forth in the Bid Booklet. Special Experience Requirements may apply to contractors, subcontractors, installers, manufacturers and/or suppliers. If the Specifications and/or the Contract Drawings contain any Special Experience Requirement that is not set forth in the Bid Booklet, such Special Experience Requirement is deemed deleted, except as otherwise provided below.
 - (a) Any Special Experience Requirement that provides that the entity performing the work or supplying the material must have more than three (3) years of experience, is revised to provide that the entity performing the work or supplying the material must have three (3) years of experience, except as described in paragraph (b) below.
 - (b) Any Special Experience Requirement that pertains to the abatement of hazardous materials shall not be subject to the deletion and/or revision set forth above. Such Special Experience Requirement shall remain in full force and effect.
 - (c) Any Special Experience Requirement that provides that the entity performing the work must be licensed, authorized, certified, approved by or acceptable to the manufacturer, is deemed deleted and replaced with the requirement that such entity must be properly trained for the specified work.
 - (d) Any Special Experience Requirement that provides that the individual workers performing the work must be licensed, authorized, certified, approved by or acceptable to the manufacturer, is deemed deleted and replaced with the requirement that such individual workers must be properly trained for the specified work.
- (6) Alternate Bids: If the agency is requesting the submission of Alternate Bids, a Notice regarding such Alternate Bids is set forth in the Bid Booklet. In the event of any conflict or inconsistency between (1) the Notice regarding Alternate Bids set forth in the Bid Booklet and (2) a provision in the Specifications and/or the Contract Drawings regarding Alternate Bids, the Notice set forth in the Bid Booklet shall prevail. If the agency is not requesting the submission of Alternate Bids, as indicated by the absence of a Notice in the Bid Booklet, and the Specifications and/or the Contract Drawings contain any provision regarding Alternate Bids, such provision is deemed deleted.
- (7) Contractor Retained Engineer: If the Specifications and/or the Contract Drawings require the Contractor to retain an Engineer to provide engineering services for the Project, the following sentence is deemed inserted: "Such Engineer must be a Professional Engineer, licensed in the State of New York."

- (8) **LEED Related Provisions:** If the Specifications and/or the Contract Drawings require the Contractor to purchase FSC certified wood, rapidly renewable materials, or materials within 500 miles, such provisions are deemed deleted and replaced with the requirement that if the contractor has purchased FSC certified wood, rapidly renewable materials, or materials within 500 miles, the contractor shall submit such forms or documentation as may be required by the City in order for the USGBC to certify that the Project qualifies for the related LEED credit(s).
- (9) **Guarantees:** Requirements for Guarantees and Maintenance are set forth in Schedule B, which is included in the Addendum to the General Conditions. In the event of any conflict or inconsistency between (1) a guarantee and/or maintenance requirement set forth in the Specifications and/or the Contract Drawings and (2) a guarantee and/or maintenance requirement set forth in Schedule B, the guarantee and/or maintenance requirement set forth in Schedule B shall prevail.
- (10) **Warranties:** Requirements for Warranties are set forth in Schedule B, which is included in the Addendum to the General Conditions.
- (a) In the event of any conflict or inconsistency between (1) a warranty requirement set forth in the Specifications and/or the Contract Drawings and (2) a warranty requirement set forth in Schedule B, the warranty requirement set forth in Schedule B shall prevail.
- (b) In the event a warranty requirement set forth in the Specifications and/or the Contract Drawings is omitted from Schedule B, such omission from Schedule B shall have no effect and the Contractor's obligation to provide the manufacturer's warranty, as set forth in the Specifications and/or the Contract Drawings, shall remain in full force and effect.
- (c) In the event a warranty requirement for a particular item of material or equipment is omitted from Schedule B, as well as from the Specifications or the Contract Drawings, and the manufacturer of such item actually provides a warranty, the Contractor shall be obligated to obtain and deliver to the Commissioner the highest level of warranty actually provided by that manufacturer.
- (11) **Exculpatory Provisions:** In the event the Specifications and/or the Contract Drawings contain any provision whereby the consultant and/or any of its officers, employees or agents, including subconsultants, is absolved of responsibility for any act or omission, such provision is deemed deleted.
- (12) **Insurance:** Provisions regarding insurance coverage the Contractor is required to provide are set forth in Article 22 of the City of New York Standard Construction Contract and Schedule A, which is included in the Addendum to the General Conditions. In the event the Specifications and/or the Contract Drawings contain any provision regarding insurance requirements, such provision is deemed deleted.
- (13) **Indemnification:** Provisions regarding indemnification are set forth in Articles 7, 12, 22 and 57 of the City of New York Standard Construction Contract. In the event the Specifications and/or the Contract Drawings contain any provision regarding indemnification, such provision is deemed deleted.
- (14) **Dispute Resolution:** Provisions regarding dispute resolution are set forth in Article 27 of the City of New York Standard Construction Contract. In the event the Specifications and/or the Contract Drawings contain any provision regarding dispute resolution, such provision is deemed deleted.
- (15) **Payment to Other Entities:** In the event the Specifications and/or the Contract Drawings contain any provision which requires the Contractor to make payments to an entity other than a subcontractor and/or supplier providing services and/or material for the project, such provision is deemed deleted.
- (16) **General Conditions:** In the event of any conflict or inconsistency between (1) the Specifications and/or the Contract Drawings and (2) the General Conditions, the General Conditions shall prevail.
- (17) **Standard Construction Contract:** In the event of any conflict or inconsistency between (1) the Specifications and/or the Contract Drawings and (2) the City of New York Standard Construction Contract, the City of New York Standard Construction Contract shall prevail.

SCHEDULE A (FOR PUBLICLY BID PROJECTS)
Contract Requirements

Various Articles of the Contract refer to requirements which are set forth in Schedule A of the General Conditions. The Schedule set forth below specifies the following: (1) the referenced Articles of the Contract, and (2) the specific requirements applicable to each separate contract.

REFERENCE	ITEM	REQUIREMENTS	CONTRACT #1
Information For Bidders	Bid Security		See Attachment 1 – Bid Information in the Bid Booklet
Information For Bidders	Performance and Payment Bonds		See Attachment 1- Bid Information in the Bid Booklet
Article 14 Contract	Time of Completion	Consecutive Calendar Days	730 ccds
Article 15 Contract	Liquidated Damages	For each consecutive calendar day over completion time	\$600
Article 17 Contract	Sub-Contracts	Not to exceed Percent of Contract Price	60%
Article 21 Contract	Retainage	Percent of Voucher	If 100% bonds are required 5% If 100% bonds are not required, and Contract Price is less than \$1,000,000 10% If 100% bonds are not required, and Contract Price is more than \$1,000,000 10%
Article 24 Contract	Deposit Guarantee	Percent of Contract Price	1%
Article 24 Contract	Period of Guarantee		See Schedule B of the Addendum to the General Conditions
Article 74 Contract	Statement of Work		See Contract Article 74
Article 75 Contract	Compensation to be Paid to Contractor		See Contract Article 75
Article 78 Contract	MWBE Program		See MWBE Utilization Plan in the Bid Booklet

SCHEDULE A (FOR PUBLICLY BID PROJECTS)

Relating to Article 22 - Insurance

PART II. Types of Insurance, Minimum Limits and Special Conditions

Note: All certificate(s) of insurance submitted pursuant to Contract Article 22.3. 3 must be accompanied by a Certification by Broker consistent with Part III below and include the following information:

- For each insurance policy, the name and NAIC number of issuing company, number of policy, and effective dates;
- Policy limits consistent with the requirements listed below;
- Additional insureds or loss payees consistent with the requirements listed below; and
- The number assigned to the Contract by the City (in the "Description of Operations" field).

Insurance indicated by a blackened box (■) or by (X) in the 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
<ul style="list-style-type: none"> ■ Commercial General Liability Art. 22.1.1 	<p>The minimum limits shall be \$5,000,000.00 per occurrence and \$10,000,000.00 per project aggregate applicable to this Contract.</p> <p>Additional Insureds:</p> <ol style="list-style-type: none"> 1. City of New York, including its officials and employees, with coverage at least as broad as ISO Forms CG 20 10 and CG 20 37, and 2. All person(s) or organization(s), if any, that Article 22.1.1(b) of the Contract requires to be named as Additional Insured(s), with coverage at least as broad as ISO Form CG 20 26. The Additional Insured endorsement shall either specify the entity's name, if known, or the entity's title (e.g., Project Manager). 2. Hudson River Park Trust (HRPT) 3. The People of the State of New York; the State of New York and the Commissioner of Transportation of New York State, and all employees of the Commissioner of Transportation both officially and personally. 4. LiRo Program and Construction Management PE PC
<ul style="list-style-type: none"> ■ Workers' Compensation Art. 22.1.2 ■ Disability Benefits Insurance Art. 22.1.2 ■ Employers' Liability Art. 22.1.2 ■ Jones Act Art. 22.1.3 ■ U.S. Longshoremen's and Harbor Workers Compensation Act Art. 22.1.3 	<p>Workers' Compensation, Employers' Liability, and Disability Benefits Insurance: Statutory per New York State law without regard to jurisdiction.</p> <p>Note: The following forms are acceptable: (1) New York State Workers' Compensation Board Form No. C-105.2, (2) State Insurance Fund Form No. U-26.3, (3) New York State Workers' Compensation Board Form No. DB-120.1 and (3) Request for WC/DB Exemption Form No. CE-200. The City will not accept an ACORD form as proof of Workers' Compensation or Disability Insurance.</p> <p>Jones Act and U.S. Longshoremen's and Harbor Workers' Compensation Act: Statutory per U.S. law.</p>

SCHEDULE A (FOR PUBLICLY BID PROJECTS)

Relating to Article 22 - Insurance

PART II. Types of Insurance, Minimum Limits and Special Conditions

Insurance indicated by a blackened box (■) or by (X) in the 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>■ Builders' Risk Art. 22.1.4</p>	<p>100 % of total value of Installed Work</p> <p>Contractor the Named Insured; the City both an Additional Insured and one of the loss payees as its interests may appear.</p> <p>If the Work does not involve construction of a new building or gut renovation work, the Contractor may provide an installation floater in lieu of Builders Risk insurance.</p> <p>Note: Builders Risk Insurance may terminate upon Substantial Completion of the Work in its entirety.</p>
<p>■ Commercial Auto Liability Art. 22.1.5</p>	<p>\$1,000,000.00 per accident combined single limit</p> <p>If vehicles are used for transporting hazardous materials, the Contractor shall provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS 90</p>
<p>■ Contractor's Pollution Liability Art. 22.1.6</p>	<p>\$1,000,000 per occurrence \$2,000,000 aggregate</p> <p>Additional Insureds: 1. City of New York, including its officials and employees, and 2. Hudson River Park Trust 3. The People of the State of New York; the State of New York and the Commissioner of Transportation of New York State, and all employees of the Commissioner of Transportation both officially and personally. 4. LiRo Program and Construction Management PE PC</p>
<p>■ Marine Protection and Indemnity Art. 22.1.7(a)</p>	<p>\$1,000,000 per occurrence \$2,000,000 aggregate</p> <p>Additional Insureds: 1. City of New York, including its officials and employees, and 2. Hudson River Park Trust 3. The People of the State of New York; the State of New York and the Commissioner of Transportation of New York State, and all employees of the Commissioner of Transportation both officially and personally. 4. LiRo Program and Construction Management PE PC</p>

SCHEDULE A (FOR PUBLICLY BID PROJECTS)

Relating to Article 22 - Insurance

PART II. Types of Insurance, Minimum Limits and Special Conditions (Continued)

Insurance indicated by a blackened box (■) or by (X) in the 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"/> Hull and Machinery Insurance Art. 22.1.7(b)	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
<input checked="" type="checkbox"/> Marine Pollution Liability Art. 22.1.7(c)	\$1,000,000 each occurrence Additional Insureds: 1. City of New York, including its officials and employees, and 2. Hudson River Park Trust 3. New York State DOT 4. LiRo Program and Construction Management PE PC
[OTHER] Art. 22.1.8 <input type="checkbox"/> Ship Repairers Legal Liability	\$ _____ each occurrence [Contracting agency to fill in total value of City vessels involved]
[OTHER] Art. 22.1.8 <input type="checkbox"/> Collision Liability/Towers Liability	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____
[OTHER] Art. 22.1.8 <input type="checkbox"/> Railroad Protective Liability	\$ _____ per occurrence \$ _____ aggregate Additional Insureds: 1. City of New York, including its officials and employees, and 2. _____ 3. _____

SCHEDULE A (FOR PUBLICLY BID PROJECTS)

Relating to Article 22 - Insurance

PART II. Types of Insurance, Minimum Limits and Special Conditions (Continued)

Insurance indicated by a blackened box (■) or by (X) in the to left will be required under this contract.

<p>[OTHER] Art. 22.1.8</p> <p>■ Asbestos Liability _____</p>	<p>Only required of the Contractor or Subcontractor performing any required asbestos removal.</p> <p>\$1,000,000 each occurrence, \$2,000,000 aggregate (Combined Single Limit); only required of the Contractor or Subcontractor performing any required asbestos removal.</p> <p>Additional Insureds: 1. City of New York, including its officials and employees, and 2. Hudson River Park Trust 3. New York State DOT 4. LiRo Program and Construction Management PE PC</p>
<p>[OTHER] Art. 22.1.8</p> <p>□ Boiler Insurance _____</p>	<p>\$200,000</p>
<p>[OTHER] Art. 22.1.8</p> <p>■ Professional Liability</p> <p>In the event any section of the Specifications requires the Contractor to engage a Professional Engineer to provide design and/or engineering services, the Engineer engaged by the Contractor, as well as any sub consultant(s) performing professional services, shall provide Professional Liability Insurance.</p>	<p>\$1,000,000 per occurrence</p> <p>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 Agreement 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>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>

SCHEDULE A (FOR PUBLICLY BID PROJECTS)

Relating to Article 22 - Insurance

PART III. Broker's Certification

[Pursuant to Article 22.3.3 of the **Contract**, every Certificate of Insurance must be accompanied by either the following certification by the broker setting forth the following text and required information and signatures or certified copies of all policies referenced in the Certificate of Insurance.]

CERTIFICATION BY BROKER

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

[Name of broker (typewritten)]

[Address of broker (typewritten)]

[Email address of broker (typewritten)]

[Phone number/Fax number of broker (typewritten)]

[Signature of authorized official or broker]

[Name and title of authorized official (typewritten)]

State of)
) ss:
County of)

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

NOTARY PUBLIC FOR THE STATE OF _____

SCHEDULE A (FOR PUBLICLY BID PROJECTS)

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**.

ACCO's Office, Insurance Unit

30-30 Thomson Avenue, 4th Floor

Long Island City, New York 11101

SCHEDULE B

Guarantees and Warranties

(Reference: Section 01 7839, Article 2.7 of the DDC Standard General Conditions)

GUARANTY FROM CONTRACTOR

(1) **Contractor's Guaranty Obligation:** 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 the Contract), except for the areas of Work set forth below:

- Roofing, Waterproofing, and Joint Sealant Work. For these types of work, the guarantee period shall be (2) two years.
- Trees and/or Plant Material. For trees and/or plant material furnished and installed, the guarantee period shall be (2) two years. During the guarantee period, the Contractor shall provide all maintenance services set forth in the Specifications.

(2) **Guaranty Period:** The obligation of the Contractor, and its Surety under the Performance Bond, is limited to the period(s) of time specified above.

(3) **Other Provisions Deemed Deleted:** In the event the Specifications and/or the Contract Drawings contain any provisions regarding guaranty requirements, such provisions are deemed deleted and replaced with the guaranty requirements set forth in this Schedule B.

WARRANTY FROM MANUFACTURER

(1) **Contractor's Obligation to Provide Warranties:** The items of material and/or equipment for which manufacturer warranties are required are listed below. For each item of material and/or equipment listed below, the Contractor shall obtain a written warranty from the manufacturer. Such warranty shall provide that the material or equipment is free from defects for the period set forth below and will be replaced or repaired within such specified period. The Contractor shall deliver all required warranties to the Commissioner.

(2) **Required Warranties:**

Specification Number	Material or Equipment	Warranty Period
265600	Luminaire	Five Years
265600	Poles	Five Years
265600	Assembly	Five Years
265600	Batteries	Five Years Pro-rated

(3) **Application:** The obligations under the warranty for the periods specified above shall apply only to the manufacturer of the material or equipment, and not to the Contractor or its Surety; provided, however, the Contractor retains responsibility for obtaining all required warranties from the manufacturers and delivering the same to the Commissioner.

(4) **Other Provisions:** The warranty requirements set forth in this Schedule B are also included in the Specifications.

(a) In the event of any conflict between a warranty requirement set forth in the Specifications and a warranty requirement set forth in Schedule B, the warranty requirement set forth in Schedule B shall take precedence.

- (b) In the event a warranty requirement set forth in the Specifications is omitted from Schedule B, such omission from Schedule B shall have no effect and the Contractor's obligation to provide the manufacturer's warranty, as set forth in the Specifications, shall remain in full force and effect
- (c) In the event a warranty requirement for a particular item of material or equipment is omitted from both Schedule B and the Specifications, and the manufacturer of such item actually provides a warranty, the Contractor shall be obligated to obtain and deliver to the Commissioner the highest level of warranty actually provided by that manufacturer.
- (d) In the event a warranty requirement is provided for a particular item of material or equipment, and such requirement specifies a warranty period that is longer than that which is actually provided by any of the specified manufacturers, the Contractor shall be obligated to obtain and deliver to the Commissioner the highest level of warranty actually provided by any of the specified manufacturers, unless otherwise directed in writing by the Commissioner.

SCHEDULE C

Contract Drawings

(Reference: Section 01 1000, Article 1.5 (A) of the DDC Standard General Conditions)

The Schedule set forth below lists all Contract Drawings for the Project.

GENERAL I	
SHEET NUMBER	SHEET TITLE
G.000.00	GENERAL COVER SHEET NO 1
G.001.00	GENERAL COVER SHEET NO 2
G.102-A	PHASING DIAGRAMS PHASE I
G.102-B	PHASING DIAGRAMS PHASE II
G.102-C	PHASING DIAGRAMS PHASE III
G.102-D	PHASING DIAGRAMS PHASE IV
G.102-E	PHASING DIAGRAMS PHASE V

TOPOGRAPHICAL & PROPERTY LINE MAP	
SHEET NUMBER	SHEET TITLE
1 of 7	SURVEY KEY SHEET MAP
2 of 7	TOPOGRAPHICAL & PROPERTY LINE MAP
3 of 7	TOPOGRAPHICAL & PROPERTY LINE MAP
4 of 7	TOPOGRAPHICAL & PROPERTY LINE MAP
5 of 7	TOPOGRAPHICAL & PROPERTY LINE MAP
6 of 7	SURVEY CONTROL
7 of 7	TRAVERSE TIES

GENERAL II

SHEET NUMBER	SHEET TITLE
AD.001.00	GENERALNOTES, SYMBOLS, LEGENDS & ABBREVIATIONS
SD-001.00	STRUCTURAL NOTES
E-001.00	ELECTRICAL SYMBOLS LIST, ABBREVIATIONS AND NOTES
M-001.00	MECHANICAL SYMBOLS, NOTES AND ABBREVIATIONS
P-001.00	PLUMBING SYMBOLS LIST, ABBREVIATIONS AND NOTES
FP-001.00	FIRE PROTECTION SYMBOLS LIST, ABBREVIATIONS AND NOTES

CIVIL

SHEET NUMBER	SHEET TITLE
BI101	FORMER BORING LOCATION PLAN (FOR REFERENCE)
CD101	SITE DEMOLITION PLAN
CD102	UTILITY DEMOLITION PLAN
CD-200	TEMPORARY CONSTRUCTION ACCESS PLAN
CD-201	SITE CIRCULATION INITIAL DEMOLITION CONDITIONS
CD-202	SITE CIRCULATION FINAL DEMOLITION CONDITIONS
CD301	APPROXIMATE GROUNDWATER DEPTHS WITHIN EXCAVATION
CD302	SITE-DEMOLITION (CROSS-SECTIONS)
CE101	SOIL EROSION AND SEDIMENT CONTROL PLAN
CG101	POST-DEMOLITION IMPROVEMENTS PLAN
CG102	EXISTING AND PROPOSED GRADING CROSS-SECTIONS
0E-100.00	ELECTRICAL SITE PLAN

DESTRUCTOR PLANT (1)

SHEET NUMBER	SHEET TITLE
1AD-101	DESTRUCTOR PLANT. DEMOLITION GROUND AND MEZZANINE FLOOR PLANS
1AD-102	DESTRUCTOR PLANT. DEMOLITION OPERATING FLOOR PLAN
1AD-103	DESTRUCTOR PLANT. DEMOLITION STORAGE ROOM FLOOR PLAN
1AD-104	DESTRUCTOR PLANT. DEMOLITION CHARGING FLOOR PLANS
1AD-105	DESTRUCTOR PLANT. DEMOLITION ROOF PLAN
1AD-201	DESTRUCTOR PLANT. DEMOLITION EAST AND SOUTH ELEVATIONS
1AD-202	DESTRUCTOR PLANT. DEMOLITION WEST AND NORTH ELEVATIONS
1AD-301	DESTRUCTOR PLANT. DEMOLITION SECTION - 1
1AD-302	DESTRUCTOR PLANT. DEMOLITION SECTIONS - 2, 2A
1AD-303	DESTRUCTOR PLANT. DEMOLITION SECTION - 3
1SD-101	DESTRUCTOR PLANT FOUNDATION & PILE DEMOLITION PLAN
1SD-102	DESTRUCTOR PLANT TIPPING & ASH REMOVAL FLOOR FRAMING DEMOLITION PLANS
1SD-103	DESTRUCTOR PLANT OPERATING FLOOR DEMOLITION PLAN
1SD-104	DESTRUCTOR PLANT LOW ROOF AND STORAGE ROOM DEMOLITION PLAN
1SD-105	DESTRUCTOR PLANT CHARGING FLOOR DEMOLITION PLAN
1SD-106	DESTRUCTOR PLANT FURNACE ROOM ROOF & CLEAR STORY DEMOLITION PLAN
1SD-107	DESTRUCTOR PLANT HIGH ROOF DEMOLITION PLAN
1SD-108	DESTRUCTOR PLANT STAIR BULKHEAD DEMOLITION PLAN
1SD-201	DESTRUCTOR PLANT DEMOLITION SECTION - 1
1SD-202	DESTRUCTOR PLANT DEMOLITION SECTION - 2
1ED-101.00	DESTRUCTOR FIRST FLOOR ELECTRICAL DEMOLITION PLAN
1ED-102.00	DESTRUCTOR SECOND FLOOR ELECTRICAL DEMOLITION PLAN

1MD-101.00	DESTRUCTOR FIRST FLOOR MECHANICAL DEMOLITION PLAN
1MD-102.00	DESTRUCTOR ROOF MECHANICAL DEMOLITION PLAN
1PD-101.00	DESTRUCTOR FIRST FLOOR PLUMBING DEMOLITION PLAN
1PD-102.00	DESTRUCTOR SECOND FLOOR PLUMBING DEMOLITION PLAN
1PD-103.00	DESTRUCTOR THIRD FLOOR PLUMBING DEMOLITION PLAN
1PD-104.00	DESTRUCTOR ROOF PLUMBING DEMOLITION PLAN
1FPD-101.00	DESTRUCTOR FIRST FLOOR FIRE PROTECTION DEMOLITION PLAN
1FPD-102.00	DESTRUCTOR SECOND FLOOR FIRE PROTECTION DEMOLITION PLAN
1FPD-103.00	DESTRUCTOR THIRD FLOOR FIRE PROTECTION DEMOLITION PLAN
1FPD-104.00	DESTRUCTOR ROOF FIRE PROTECTION DEMOLITION PLAN

GARAGE (2)	
SHEET NUMBER	SHEET TITLE
2AD-101	GARAGE. FIRST FLOOR DEMOLITION PLAN
2AD-102	GARAGE. SECOND FLOOR DEMOLITION PLAN
2AD-103	GARAGE. ROOF DEMOLITION PLAN
2AD-201	GARAGE. DEMOLITION ELEVATIONS
2AD-301	GARAGE. DEMOLITION SECTIONS
2AD-801	GARAGE. REFLECTED CEILING DEMOLITION PLANS
2SD-101	M5 GARAGE PILE AND PILE CAP DEMOLITION PLAN
2SD-102	M5 GARAGE FOUNDATION DEMOLITION PLAN
2SD-103	M5 GARAGE SECOND FLOOR/LOW ROOF FRAMING DEMOLITION PLAN

2SD-104	M5 GARAGE HIGH ROOF FRAMING DEMOLITION PLAN
2ED-101.00	GARAGE FIRST FLOOR ELECTRICAL DEMOLITION PLAN
2ED-102.00	GARAGE SECOND FLOOR ELECTRICAL DEMOLITION PLAN
2MD-101.00	GARAGE FIRST FLOOR MECHANICAL DEMOLITION PLAN
2MD-102.00	GARAGE FIRST FLOOR MECHANICAL DEMO CEILING PLAN
2MD-103.00	GARAGE SECOND FLOOR MECHANICAL DEMOLITION PLAN
2MD-104.00	GARAGE SECOND FLOOR MECHANICAL DEMO CEILING PLAN
2MD-105.00	GARAGE ROOF MECHANICAL DEMOLITION PLAN
2PD-100.00	GARAGE UNDERGROUND PLUMBING DEMOLITION PLAN
2PD-101.00	GARAGE FIRST FLOOR PLUMBING DEMOLITION PLAN
2PD-102.00	GARAGE SECOND FLOOR PLUMBING DEMOLITION PLAN
2PD-103.00	GARAGE ROOF PLUMBING DEMOLITION PLAN

MTS (3)	
SHEET NUMBER	SHEET TITLE
3AD-101	MTS. PIER LEVEL FLOOR DEMOLITION PLAN
3AD-102	MTS. TIPPING FLOOR DEMOLITION PLAN
3AD-103	MTS. ROOF DEMOLITION PLAN
3AD-201	MTS. EAST AND SOUTH ELEVATIONS
3AD-202	MTS. WEST AND NORTH ELEVATIONS
3AD-301	MTS. CROSS & LONGITUDINAL SECTIONS

3SD-101	MTS PIER FOUNDATION DEMOLITION PLAN
3SD-102	MTS PIER DEMOLITION PLAN
3SD-103	MTS FLOOR FRAMING DEMOLITION PLAN & DETAILS
3SD-104	MTS ROOF FRAMING DEMOLITION PLAN
3SD-201	MTS DEMOLITION ELEVATIONS
3SD-202	MTS DEMOLITION ELEVATIONS
3SD-203	MTS TRUSS DEMOLITION ELEVATIONS
3SD-301	MTS RAMP FOUNDATION DEMOLITION PLAN
3SD-302	MTS RAMP FRAMING DEMOLITION PLAN
3SD-303	MTS RAMP DEMOLITION SECTIONS
3ED-101.00	PIER SECOND FLOOR ELECTRICAL DEMOLITION PLAN
3MD-101.00	PIER SECOND FLOOR MECHANICAL DEMOLITION PLAN
3PD-101.00	PIER FIRST FLOOR PLUMBING DEMOLITION PLAN

SALT SHED (4)

SHEET NUMBER	SHEET TITLE
4AD-101	SALT SHED. FIRST FLOOR DEMOLITION PLAN
4AD-102	SALT SHED. ROOF DEMOLITION PLAN
4AD-201	SALT SHED. DEMOLITION ELEVATIONS
4AD-301	SALT SHED. DEMOLITION SECTIONS - 1, 2
4SD-101	SALT SHED FOUNDATION DEMOLITION PLAN
4SD-102	SALT SHED ROOF FRAMING DEMOLITION PLAN

4SD-201	SALT SHED DEMOLITION ELEVATIONS & DETAILS
4ED-101.00	SALT SHED FIRST FLOOR ELECTRICAL DEMOLITION PLAN
4MD-101.00	SALT SHED ROOF MECHANICAL DEMOLITION PLAN
EOL-100.00	ELECTRICAL LIGHTING SITE PLAN

ABATEMENT	
SHEET NUMBER	SHEET TITLE
AH-001.00	GENERAL SITE PLAN
AH-002.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE/SEALED INCINERATOR ROOMS FIRST FLOOR ENVIRONMENTAL LIMITS OF WORK
AH-003.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE/SEALED INCINERATOR ROOMS SECOND FLOOR ENVIRONMENTAL LIMITS OF WORK
AH-004.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE/SEALED INCINERATOR ROOMS THIRD FLOOR ENVIRONMENTAL LIMITS OF WORK
AH-005.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE/SEALED INCINERATOR ROOMS FOURTH, FIFTH AND SIXTH FLOORS ENVIRONMENTAL LIMITS OF WORK
AH-006.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE/SEALED INCINERATOR ROOMS ROOF ENVIRONMENTAL LIMITS OF WORK
AH-007.00	GANSEVOORT DESTRUCTOR PLANT NORTH AND EAST ELEVATIONS ENVIRONMENTAL LIMITS OF WORK
AH-008.00	GANSEVOORT DESTRUCTOR PLANT SOUTH AND WEST ELEVATIONS ENVIRONMENTAL LIMITS OF WORK
AH-009.00	GANSEVOORT DESTRUCTOR PLANT NORTH AND WEST SECTIONS ENVIRONMENTAL LIMITS OF WORK
AH-010.00	MARINE TRANSFER STATION (MTS) FIRST FLOOR ENVIRONMENTAL LIMITS OF WORK

AH-011.00	MARINE TRANSFER STATION (MTS) PIER LEVEL ENVIRONMENTAL LIMITS OF WORK
AH-012.00	MARINE TRANSFER STATION (MTS) EAST AND WEST ELEVATIONS ENVIRONMENTAL LIMITS OF WORK
AH-013.00	MARINE TRANSFER STATION (MTS) NORTH AND SOUTH ELEVATIONS ENVIRONMENTAL LIMITS OF WORK
AH-014.00	RAMPS AND ROOMS UNDER RAMP PLAN AND ELEVATIONS ENVIRONMENTAL LIMITS OF WORK
AH-015.00	SALT SHED PLAN AND ELEVATION ENVIRONMENTAL LIMITS OF WORK
AH-016.00	MANHATTAN 5 GARAGE FIRST AND SECOND FLOORS AND ROOF ENVIRONMENTAL LIMITS OF WORK
AH-017.00	MANHATTAN 5 GARAGE ELEVATIONS ENVIRONMENTAL LIMITS OF WORK
H-001.00	ASBESTOS ABATEMENT GENERAL NOTES
H-002.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS - ASH REMOVAL FLOOR ASBESTOS ABATEMENT PLAN - PHASE I
H-003.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS - OPERATING FLOOR ASBESTOS ABATEMENT PLAN - PHASE I
H-004.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS - STORAGE FLOOR ASBESTOS ABATEMENT PLAN - PHASE I
H-005.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS - FOURTH, FIFTH, AND SIXTH FLOORS ASBESTOS ABATEMENT PLAN - PHASE I
H-006.00	GANSEVOORT DESTRUCTOR PLANT ROOF ASBESTOS ABATEMENT PLAN - PHASE II
H-007.00	GANSEVOORT DESTRUCTOR PLANT FIRST FLOOR ASBESTOS ABATEMENT PLAN - PHASE II
H-008.00	GANSEVOORT DESTRUCTOR PLANT SECOND FLOOR ASBESTOS ABATEMENT PLAN - PHASE II
H-009.00	GANSEVOORT DESTRUCTOR PLANT THIRD FLOOR ASBESTOS ABATEMENT PLAN - PHASE II

H-010.00	GANSEVOORT DESTRUCTOR PLANT FOURTH FLOOR ASBESTOS ABATEMENT PLAN - PHASE II
H-011.00	GANSEVOORT DESTRUCTOR PLANT FIFTH AND SIXTH FLOORS ASBESTOS ABATEMENT PLAN - PHASE II
H-012.00	MARINE TRANSFER STATION (MTS) EXTERIOR ROOF ASBESTOS ABATEMENT PLAN - PHASE II
H-013.00	MARINE TRANSFER STATION (MTS) INTERIOR ROOF ASBESTOS ABATEMENT PLAN - PHASE II
H-014.00	MARINE TRANSFER STATION (MTS) LOWER LEVEL PIER ASBESTOS ABATEMENT PLAN - PHASE II
H-015.00	MARINE TRANSFER STATION (MTS) FIRST FLOOR ASBESTOS ABATEMENT PLAN - PHASE II
H-016.00	MARINE TRANSFER STATION (MTS) RAMP AND ROOMS UNDER RAMP ASBESTOS ABATEMENT PLAN - PHASE II
H-101.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS ASH REMOVAL FLOOR (FIRST FLOOR) ENVIRONMENTAL WORK AREAS - PHASE I
H-102.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS OPERATING FLOOR (SECOND FLOOR) ENVIRONMENTAL WORK AREAS - PHASE I
H-103.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS MEZZANINE (THIRD FLOOR) ENVIRONMENTAL WORK AREAS - PHASE I
H-104.00	GANSEVOORT DESTRUCTOR PLANT SEALED INCINERATOR ROOMS FOURTH, FIFTH AND SIXTH FLOORS ENVIRONMENTAL WORK AREAS - PHASE I
H-105.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE FIRST FLOOR AND MEZZANINE ENVIRONMENTAL WORK AREAS - PHASE II
H-106.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE SECOND FLOOR ENVIRONMENTAL WORK AREAS - PHASE II
H-107.00	GANSEVOORT DESTRUCTOR PLANT M2 GARAGE THIRD FLOOR ENVIRONMENTAL WORK AREAS - PHASE II
H-108.00	MARINE TRANSFER STATION (MTS) FIRST FLOOR PLAN ENVIRONMENTAL WORK AREAS - PHASE II
H-109.00	MARINE TRANSFER STATION (MTS) PIER LEVEL PLAN ENVIRONMENTAL WORK AREAS - PHASE II

H-110.00	RAMPS AND ROOMS UNDER RAMP PLAN AND ELEVATIONS ENVIRONMENTAL WORK AREAS - PHASE II
H-111.00	SALT SHED PLAN ENVIROMENTAL WORK AREAS - PHASE II
H-112.00	MANHATTAN 5 GARAGE FLOOR PLANS AND ROOF PLAN ENVIRONMENTAL WORK AREAS - PHASE II
H-113.00	UNDERGROUND STORAGE TANKS, ABOVEGROUND STORAGE TANKS, AND OIL WATER SEPARATORS ENVIRONMENTAL WORK AREAS - PHASE II

SCHEDULE D

NO TEXT

SCHEDULE E

Separation of Trades

NOT USED FOR SINGLE CONTRACTS

SCHEDULE F

Submittals Schedule

(Reference: Section 01 3300 Article 1.5 (C) of the General Conditions)

The Schedule set forth below lists all submittal requirements for the Contract. In the event of any conflict between the Specifications and this Schedule F, Schedule F shall take precedence; provided, however, in the event of an omission from Schedule F (i.e., Schedule F omits either a reference to or Contractor's submittal obligation, as set forth in the Specifications), such omission from Schedule F shall have no effect and the

CONSULTANT:
 TELEPHONE NUMBER:
 DDC PROJECT MANAGER:
 TELEPHONE NUMBER:

DATE: _____
 APPROVED: _____

REPORT DATE		FMS ID #PROJECT ID #: CONTRACT REGISTRATION #: PROJECT NAME:	(DDC RESIDENT ENGINEER/CPM)									
SPEC. SECT. #	DESCRIPTION	COORD. WITH CONTR.	CONTRACT #:	TRADE: SHOP DRAWING LOG SHEET #								
			CONTRACT #:	SUBMISSIONS								
				REC'D	RET'D	ACTION	REC'D	RET'D	ACTION	REC'D	RET'D	ACTION
			Contract 1 – GENERAL CONSTRUCTION									
016000	PRODUCT REQUIREMENTS	X										
02 0010	SUMMARY OF ENVIRONMENTAL AND INCINERATOR DECOMMISSIONING WORK.	X										
02 0020	Health and Safety Plan	X										
02 0030	Emergency Spill Control Plan	X										
02 0100	PROTECTION OF EXISTING FACILITIES	X										
020350	MAINTENANCE AND PROTECTION OF TRAFFIC	X										
024100	Shoring protection Design	X										
024100	Utility shut-offs	X										

02 6100	Soil Field Report	X																				
02 6100	Logs, Reports, Records	X																				
02 6100	Bills of Lading, Weight Tickets	X																				
02 6500	Plan of Operations	X																				
02 6500	Chemical Data Acquisition Plan	X																				
02 6500	Testing Results	X																				
02 6500	Manifests	X																				
02 6500	Documentation of Disposal	X																				
02 6500	Letters of Acceptance	X																				
026500. 10	Plan of Operations	X																				
026500. 10	Manifests	X																				
026500. 10	Documentation of Disposal	X																				
026500. 10	Letters of Acceptance	X																				
02 7100	System Schematic		X																			
02 7100	Work Plan	X																				
02 7100	Metering Records	X																				
02 8013	Scope, Work Plan & Schedule	X																				
02 8013	Notifications, Variances & Plans	X																				
02 8013	Permits, Clearance & Licenses	X																				
02 8013	Emergency Procedures	X																				
02 8013	Safety Data Sheets	X																				
02 8013	Training and Medical Surveillance	X																				
02 8013	Daily Progress, Visitor & Disposal Logs	X																				

02 8013	Worker Acknowledgments	X																					
02 8013	Security and Safety Logs	X																					
02 8013	Construction Progress Logs	X																					
02 8013	Floor Plans	X																					
02 8013	Air Monitoring and Inspection Results	X																					
02 8013	Lien Waivers	X																					
02 8013	OSHA Monitoring Results	X																					
02 8013	Waste Manifests, Seals, and Disposal Logs	X																					
02 8013	Shift Logs	X																					
02 8013	Building Dept. Forms and Permits	X																					
02 8013	Letter of Compliance	X																					
02 8013	Warranties	X																					
02 8013	Project Record	X																					
02 8120	Work Plan	X																					
02 8130	Work Plan	X																					
02 8213	Scope, Work Plan & Schedule	X																					
02 8213	Construction, Staffing, & Equipment Schedules and Changes	X																					
02 8213	Work Site and Decon Plan and Shop Drawings	X																					
02 8213	PPE Descriptions	X																					
02 8213	Delineation of Responsibility	X																					
02 8213	Decon. Sequence and Techniques	X																					

02 8213	Equipment Descriptions		X																			
02 8213	Description of Methods & Techniques		X																			
02 8213	ACM Waste Handling Description		X																			
02 8213	Qualifications of Monitor and Proof of Proficiency		X																			
02 8213	Emergency Procedures		X																			
02 8213	Safety Data Sheets		X																			
02 8213	Training and Medical Surveillance		X																			
02 8213	Daily Progress, Visitor & Disposal Logs		X																			
02 8213	Worker Acknowledgments		X																			
02 8213	Security and Safety Logs		X																			
02 8213	Construction Progress Logs		X																			
02 8213	Floor Plans		X																			
02 8213	Air Monitoring and Inspection Results		X																			
02 8213	Lien Waivers		X																			
02 8213	OSHA Monitoring Results		X																			
02 8213	Waste Manifests, Seals, and Disposal Logs		X																			
02 8213	Shift Logs		X																			
02 8213	Building Dept. Forms and Permits		X																			
02 8213	Letter of Compliance		X																			
02 8213	Warranties		X																			
02 8213	Project Record		X																			
02 8213	DOB Certifications		X																			

02 8313	Work Plan																		X	
02 8416	Work Plan and H&S Plan																		X	
02 8416	Recyclers Permits & Licenses																		X	
02 8416	Transporters Permits & Licenses																		X	
02 8416	Recipient Facilities Permits & Licenses																		X	
02 8416	Waste Transport and Disposal Documents and Certs. of Destruction																		X	
02 8433	Work Plan																		X	
02 8600	Qualifications																		X	
02 8600	Transport and Disposal manifests																		X	
02 8600	Waste Record Field Report																		X	
02 8600	Logs and Reports																		X	
02 8600	Bills of Lading and Weight Tickets																		X	

033129	Qualification Data																		X	
033129	Product Data																		X	
033129	Shop Drawing Submittals (i.e., plans, details, elevations, etc.)																		X	
033129	Quality Control Submittals																		X	
033129	Sample Verification																		X	
033129	Field Sample																		X	

034100	Qualification Data	X																				
034100	Product Data																					
034100	Shop Drawing for prestressed and precast members		X																			
034100	Quality Control Data		X																			
034100	Source Quality Control Data		X																			
051200	Product Data								X													
051200	Shop Drawings for Structural Steel		X																			
051200	Welding Procedure	X																				
051200	Qualification Data	X																				
051200	Quality Assurance	X																				
051200	Existing Condition Survey	X																				
265600	Exterior Light Poles	X	X												X							
312000	Product Data								X	X												
312000	Qualification Data	X																				
312000	Material Test Report	X													X							
312000	Preexcavation Photographs	X																				
312000	Quality Assurance	X																				
312200	SITE GRADING	X																				
312300	Environmental compliance certificates for fill materials																					

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02 00 20	ENVIRONMENTAL HEALTH AND SAFETY
02 00 30	EMERGENCY SPILL CONTROL
02 01 00	PROTECTION OF EXISTING FACILITIES
02 03 50	MAINTENANCE AND PROTECTION OF TRAFFIC
02 41 00	BUILDING DEMOLITION AND DEBRIS REMOVAL
02 41 13.23	HYDRAULIC SYSTEMS AND FUEL OIL PIPE REMOVAL
02 41 19.16	INTERIOR DEMOLITION
02 41 19.19	ELECTRICAL SYSTEM DISMANTLEMENT DURING ABATEMENT PHASE
02 51 00	BUILDING DECONTAMINATION
02 51 29	ASH / DUST / DEBRIS REMOVAL AND MATERIAL DECONTAMINATION
02 51 29.13	SEWER AND UTILITY CLEANOUT
02 60 00	CONTAMINATED SITE MATERIAL AND WASTE REMOVAL AND DISPOSAL
02 61 00	EXCAVATION AND REMOVAL OF CONTAMINATED SOIL
02 65 00	REMOVAL OF UNDERGROUND STORAGE TANKS
02 65 00.10	ABOVE GROUND STORAGE TANK REMOVAL AND DISPOSAL
02 71 00	WATER TREATMENT SYSTEM
02 80 13	ALLOWANCE FOR INCIDENTAL ASBESTOS ABATEMENT
02 81 20	REMOVAL AND DISPOSAL OF HEAVY METALS CONTAINING MATERIAL
02 81 30	REMOVAL OF CHLORINATED FLUOROCARBONS
02 82 13	ASBESTOS ABATEMENT
02 83 13	LEAD HAZARD MANAGEMENT
02 84 16	REMOVAL OF UNIVERSAL WASTE
02 84 33	REMOVAL OF PCB-BEARING MATERIALS
02 86 00	REMOVAL OF DRUMMED WASTE AND DECONTAMINATION WATER
03 31 29	MARINE CONCRETE
03 41 00	PRECAST AND PRESTRESSED CONCRETE
05 12 00	STRUCTURAL STEEL FRAMING
31 20 00	EARTH MOVING
31 22 00	SITE GRADING
31 23 00	BACKFILL OF BUILDING AND UTILITY REMOVAL AREAS
31 23 23.13	BACKFILL MATERIAL ENVIRONMENTAL TESTING REQUIREMENTS
31 25 00	SOIL EROSION AND SEDIMENT CONTROL
31 62 13	PRESTRESSED CONCRETE PILES
31 62 16.13	STEEL SHEET PILING
32 12 00	ASPHALT PAVING
32 16 13	CONCRETE CURBS
32 31 00	TEMPORARY AND PERMANENT CHAIN LINK FENCE AND GATES

APPENDIX

A.1	REFERENCE BORING DOCUMENTS
A.2	SWPPP
A.3	SEAWALL PERMITS
A.4	PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT
A.5	PHASE II ENVIRONMENTAL SITE INVESTIGATION REPORT
A.6	FINAL HAZMAT REPORT - SALT SHED, M2, M5, MTS
A.7	FINAL HAZMAT REPORT - SEALED INCINERATOR ROOMS
A.8	FINAL ASBESTOS SURVEY REPORT SALT SHED, M2, M5, MTS
A.9	FINAL ASBESTOS SURVEY REPORT SEALED INCINERATOR ROOMS

CONTRACT # 1
GENERAL CONSTRUCTION WORK

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SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other General Requirements apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
1. General Conditions Section "References" for applicable industry standards for products specified.
 2. General Conditions Section "Closeout Procedures" for submitting warranties for Contract closeout.
 3. Divisions 02 through 32 for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

- C. **Basis-of-Design Product Specification:** Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. **Product List:** Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - a. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 4. Completed List: Within 60 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 5. Commissioner's Action: Commissioner will respond in writing to Contractor within 15 days of receipt of completed product list. Commissioner's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Commissioner's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.
- B. **Substitution Requests:** Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Use CSI Form 13.1A

2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Commissioner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of Commissioners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Commissioner's Action: If necessary, Commissioner will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Commissioner will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Acceptance: Change Order.
 - b. Use product specified if Commissioner cannot make a decision on use of a proposed substitution within time allocated.
- C. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Commissioner's Action: If necessary, Commissioner will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Commissioner will notify Contractor through Construction Manager of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in General Conditions "Submittal Procedures."
 - b. Use product specified if Commissioner cannot make a decision on use of a comparable product request within time allocated.
- D. Basis-of-Design Product Specification Submittal: Comply with requirements in General Conditions "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
 1. The contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
 1. Store products to allow for inspection and measurement of quantity or counting of units.

2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment. Coordinate location with City of New York.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
1. **Manufacturer's Warranty:** Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Commissioner.
 2. **Special Warranty:** Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Commissioner.
- B. **Special Warranties:** Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
1. **Manufacturer's Standard Form:** Modified to include Project-specific information and properly executed.
 2. **Specified Form:** When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
 3. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. **Submittal Time:** Comply with requirements in General Conditions "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. **General Product Requirements:** Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Commissioner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Commissioner will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Commissioner's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
 8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.

9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Commissioner's sample. Commissioner's decision will be final on whether a proposed product matches.
 - a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.

10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Commissioner will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Commissioner will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Commissioner will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Commissioner.

- B. Conditions: Commissioner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Commissioner will return requests without action, except to record noncompliance with these requirements:
 1. Requested substitution offers Commissioner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Commissioner must assume. Commissioner's additional responsibilities may include compensation to Commissioner for redesign and evaluation services, increased cost of other construction by Commissioner, and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Substitution request is fully documented and properly submitted.
 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
 7. Requested substitution is compatible with other portions of the Work.
 8. Requested substitution has been coordinated with other portions of the Work.
 9. Requested substitution provides specified warranty.

10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

2.3 COMPARABLE PRODUCTS

- A. Conditions: Commissioner will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Commissioner will return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of Commissioners and Commissioners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 02 00 10

SUMMARY OF ENVIRONMENTAL AND INCINERATOR DECOMMISSIONING WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions, apply to this section.

1.02 PROJECT DESCRIPTION:

- A. The project generally consists of the complete decontamination and demolition of the New York City Department of Sanitation (DSNY) facilities including the Marine Transfer Station (MTS) at the Gansevoort Peninsula and contents, asbestos removal, demolition, compliance testing, removal and disposal of all related wastes, and all ancillary activities required to clean and clear the Site. The major environmental scope of work items are listed below:

1. Asbestos Removal/Disposal
2. Building and Equipment Decontamination
3. Interior Demolition of All Equipment and Structures Within Sealed Incinerator Rooms
4. Lead Based Paint Control/Removal
5. PCB-Bearing Equipment Removal/Cleaning/Disposal
6. Chlorinated Fluorocarbons Containing equipment Removal/Disposal
7. Mercury Containing Equipment Removal/Disposal
8. Drummed Waste Removal/Disposal
9. Underground and Aboveground Storage Tank Removal
10. Hydraulic Systems and Fuel Oil Piping Removal
11. Removal of All Below Ground Oil/Water Separators
12. Soil and Groundwater Sample Collection/Analysis Following Tank Removal/Closure Activities
13. Excavation and Disposal of Contaminated Soil
14. Sewer and Utility Cleanout
15. Waste characterization and proper disposal of all hazardous and non-hazardous materials

- B. Project Requirements

The Contractor is responsible for the detailed engineering and management required for the decontamination, demolition, disposal, and restoration of the project Site. The Contractor shall be responsible for the detailed items of work:

C. Building Demolition

1. The Contractor is responsible for the demolition of all City of New York facilities including the Marine Transfer Station (MTS) at the Gansevoort Peninsula.
2. In general, the work shall include all shoring and/or bracing required to temporarily maintain parts of all structures in a stable condition until demolition is completed. Solid construction fencing and shielding is required during the project.
3. Demolition shall be executed in an orderly and careful manner in accordance with all applicable codes and regulations, with due consideration for the surrounding buildings, roadways, vehicles, premises, and pedestrians. The Contractor's demolition plan shall comply with all requirements of the New York City Building Code. The demolition plan shall include the design and installation of all necessary shielding, catch platforms, and safety netting to protect vehicles and pedestrians on the adjacent roadways.
4. Demolition adjacent to neighboring buildings shall be done in a manner to protect surrounding buildings from damage. All damage to adjacent buildings, vehicles, or property shall be repaired by the Contractor without cost to the City of New York.

D. Electrical Distribution System Dismantlement, Removal and Rearrangement

Numerous electrical lines, panels and equipment within the Sealed Incinerator Rooms work area are live. The Contractor is responsible for providing a licensed electrician to evaluate the existing electrical system and to develop a plan for de-energizing all live panels, equipment and lines within the Sealed Incinerator Rooms work area while maintaining all necessary electrical service to active portions of the facility. The Contractor is also responsible for the rearrangement or installation of lines necessary to maintain power to the active garage and office areas. All costs associated with the removal and disposal of all wiring, panels and electrical equipment from the work area shall be included in the Contractor's lump sum bid.

E. Asbestos Removal

The Contractor shall remove all asbestos containing materials from the facilities to allow for complete building demolition. Asbestos containing materials sampled and known to be present at the Site include:

1. MTS: Window Caulk; Roof Felt (First Layer); Roof Rigid Insulation (Third Layer); Roof Gypsum Layer (Fourth Layer); Roof Vapor Barrier (Fifth Layer); Caulk at Door Frame; Tar on Wooden Pier Columns; and, Air-cell Pipe Insulation Sleeves through Wall Penetrations.
2. Ramp: Expansion Joint Caulk at Retaining Wall (Exterior); Pipe and Pipe Joint Insulation under Black Tar Canvas; and, Pipe Joint Insulation on Horsehair Insulated Pipe.

3. Manhattan 2 (M2) Garage: Expansion Joint Caulk (At Cornice and Coping Stone); Roof Base Flashing; Tar Associated with Pitch Pocket, Drains, and Penetrations; Caulk at Cap Flashing; Caulk at Door Frame; Caulk on Conduit and Façade; Caulk on Façade; Roof Membrane (First Layer); Roof Vapor Barrier (Second Layer); Window Caulk, Exterior; Window Glazing, Exterior; Caulk at Window Sill and Cornice; Expansion Joint Caulk, Exterior; Brown Layered Paper Pipe and Pipe Joint Insulation; Black 9"x9" Floor Tiles and associated Mastic; White 12"x12" Floor Tiles; Black Spandrel Flashing Tar; Black Cove-base and associated Yellow Mastic; and, White Magnesia Insulation on Pipes and Pipe Joints.
4. Sealed Incinerator Rooms: Refractory Brick; Gray mortar to yellow refractory brick; Fibrous board; Duct Insulation; Furnace Siding Insulation; Floor debris; Gaskets; Boiler Insulation; Mortar; Boiler Breaching Insulation; Wire Insulation; Pipe Insulation and Mud Pipe Fittings; Electrical Backer Board; and, Vibration Damper.
5. The black spandrel flashing tar at the Destructor Building/M2 Garage was concealed and not accessible during ACM survey work; however Contractor shall assume that the material is ACM and requires abatement in the lump sum bid.

F. Building and Equipment Decontamination

1. The Contractor shall perform all work necessary to carry out the proper decontamination of all facility equipment and interior surfaces in accordance with all applicable regulations.

2. Equipment and surfaces to be cleaned include, but are not limited to, concrete, floors, ceilings, brick/sheetrock wall debris, structural steel, stairways, platforms, catwalks, grating, pipes, conduits, light fixtures, fixed, semi-fixed and non-fixed items, windows, window sills and window equipment, air handling units, the building interior, and all incinerator equipment and apparatus. Items to be disposed of as hazardous waste may include, but are not limited to, ash, refractory brick, asbestos containing material, debris, dust, hazardous material-bearing equipment, non-decontaminated equipment and apparatus, debris, decontamination liquids and tools, and PPE. Areas of accumulated ash, dust, and debris are located throughout the Sealed Incinerator Rooms. All materials (i.e., ash, dust and debris) recovered during the cleaning of equipment and all interior surfaces of the incinerator portion of the building shall be handled as metals-contaminated hazardous wastes and asbestos containing wastes. All ash, refractory brick, debris, and dust removed from the furnaces, flues, boilers and ducts shall also be handled as metals-contaminated hazardous wastes and asbestos contaminated wastes.

G. Lead Based Paint Removal/Control

The Contractor shall perform all work necessary to carry out the proper removal and disposal of all flaking or chipping lead based paint (LBP) in accordance with all applicable laws, codes, rules and regulations. LBP in good condition (i.e., non-deteriorated) is present in all portions of the facility. The Contractor shall perform all work necessary to control/prevent lead releases during the building demolition and dispose of LBP-bearing materials in accordance with all Federal, State, and Local regulatory requirements.

H. PCB-Bearing Equipment Removal

The Contractor shall perform all services necessary for the removal, cleaning, and disposal of equipment containing Polychlorinated Biphenyls (PCBs). The Contractor is also required to clean surfaces (i.e., mounting pads, adjacent concrete or metal structures) which are contaminated by the leakage or spillage of PCB containing fluids. PCB bearing equipment to be cleaned, removed and disposed of include, but is not limited to, transformers, electric control panels, furnace conveyor motor drive units, switchroom electrical equipment, and overhead crane electrical equipment.

I. Removal of Chlorinated Fluorocarbons Containing Equipment

The Contractor is responsible to perform all operations necessary to remove chlorinated fluorocarbon (CFC) containing equipment. CFC equipment at the Site includes, but is not limited to, air conditioners, refrigerators, drinking fountains, and garage equipment. The Contractor shall remove and dispose of all CFCs and compressor/equipment oils from CFC equipment.

J. Mercury Containing Equipment Removal

The Contractor is responsible for the removal and disposal of metallic mercury containing lights and vacuum tubes present throughout the facility. The Contractor is required to remove the mercury containing lights and vacuum tubes and place them into a designated sealable, labeled plastic container. Any sludge or buildup on the inside of the instruments which has become contaminated with mercury should also be placed in a labeled, sealable container for disposal. Contaminated sludge or buildup should be removed from the interior surfaces of the items using hand held instruments.

K. Drummed Waste Removal

The Contractor is responsible for the transport and disposal of any drummed petroleum products and drummed waste materials located within the facility, and decontamination wash water generated by the washing of equipment and the interior of the building. All work shall be conducted in accordance with all applicable Federal, State, and Local regulations and the provisions of this and accompanying specifications.

L. Underground and Aboveground Storage Tank Removal

1. The Contractor is required to provide all labor, equipment, and materials required to perform all operations necessary to remove soils, dispose of tank contents, residues, contaminated soils, and debris and remove and dispose of underground and aboveground storage tanks, oil/water separators and appurtenances in accordance with all applicable Federal, State and Local regulations and the provisions of this and accompanying specifications. The Contractor is required to provide all soil and groundwater sampling and

analysis in accordance with all applicable Federal, State and local regulations and the provisions of this and accompanying specifications. The Contractor shall prepare a tank closure report for all removed USTs, ASTs and oil/water separators removed during the work.

2. Site records indicate that a minimum of seven (7) USTs, eight (8) ASTs, and one (1) oil/water separator require removal. The tanks and approximate locations are identified on the Contract Drawings. Removal of all below ground oil/water separators and any unknown/unregistered tanks is also required.

M. Hydraulic Systems and Fuel-Oil Pipe Removal

The Contractor is responsible for the decommissioning of truck lift hydraulic systems, air compressors and fuel oil/heating systems using procedures for limiting occupational and environmental exposure to oils when closing these systems. The Contractor shall furnish all labor, equipment, and materials required to perform all operations necessary to drain, purge, clean, remove, and dispose of all hydraulic oil and fuel oil systems.

N. Excavation and Disposal of Contaminated Soil

1. The Contractor is responsible for the transport and disposal of contaminated soil which should be excavated and stockpiled throughout the project area, including all work associated with final site restoration and testing of soil and groundwater associated with the excavations and stockpiles, and any associated incidental work as deemed appropriate by the Commissioner. All work shall be conducted in accordance with all applicable Federal, State, and Local regulations and the provisions of this and accompanying specifications. Soil excavation work shall be limited to a Site-wide 5 foot cut and excavation to the extent required to remove the underground storage tanks and oil/water separator. Contaminated soil may also be encountered during the cleaning and sealing of underground utilities.
2. All excavated soil and fill shall be considered to be, at minimum, non-hazardous contaminated soils and disposed of off-site at a permitted landfill or disposal facility.
3. The Site-wide excavation will be backfilled with 5 feet of clean crushed stone in accordance with the agreement between the City and HRPT.

O. Dewatering System

The Contractor shall furnish all labor, materials, tools and equipment, for the purpose of supplying, monitoring, maintaining and operating necessary dewatering systems required for the removal of underground storage tanks, oil/water separators, foundations, subsurface structures and associated utilities.

P. Sewer and Utility Cleanout

The Contractor is responsible for all labor, equipment, and materials required to perform all operations necessary to drain, purge, clean, and seal or remove all facility utilities including, but not limited to, sewers, troughs, sumps, pits, traps, discharge, and floor drain systems.

Q. General Documentation Requirements

Upon completion of the work and prior to final acceptance, the Contractor shall provide to the Commissioner, all approvals and professionally stamped and sealed as appropriate, documentation that the work was performed in accordance with current Federal, State, and Local laws and regulations. Required documentation is detailed in the Contract Drawings and Division 2 specifications and includes, but is not limited to:

1. Copies of approved State and City regulatory agency permits
2. Copies of all asbestos variance requests and approvals
3. Copies of any reports prepared relating to asbestos or hazardous materials
4. Copies of all correspondence with outside governing agencies
5. Copies of all approved permits, shop drawings and submittals
"As-Built" drawings of demolition project including utility termination locations and any other information discovered on all utilities
6. Copies of all hazardous waste and asbestos manifests and disposal records including the results of any analytical testing required for transportation and disposal
7. Copies of all analytical testing results generated during the cleaning and removal of materials (including asbestos) from the Site. Copies of all information, specifications and drawings discovered or developed detailing the existing, or modifications to storm and sanitary sewer systems at the property
8. Copies of NYSDEC certification that any contaminated soils excavated and then treated and reused or left at the Site have been sufficiently decontaminated.

R. Laboratory and Sampling Services

The Contractor is responsible to subcontract the services of an independent environmental consultant/laboratory to provide sampling/analysis services required for compliance monitoring and materials disposal. Sampling/analysis is expected to include, but is not limited to, air monitoring samples (dust and metals), PCB confirmation/characterization samples, UST closure samples, personal exposure monitoring samples and waste characterization samples. The Contractor's consultant must have all appropriate certifications or licenses to perform the various sampling required (i.e., NYCDEP/NYSDOL licenses, certifications, and OSHA training). The City of New York will hire an independent asbestos monitoring firm. All costs associated with any environmental sampling, consulting, and laboratory services shall be included in the Contractor's lump sum bid price.

1.03 WORK SEQUENCE:

A. The environmental cleanup and demolition of the facility shall be conducted in phases. The schedule and phasing have the following constraints:

1. The Sealed Incinerator Rooms of the Destructor Building/M2 Garage can be abated and demolished upon mobilization.
2. Abatement and demolition of the M2 Garage, M5 Garage, and Salt Shed, other than abatement of the Sealed Incinerator Rooms of the Destructor Building/M2 Garage shall not begin until approximately nine month following mobilization.
3. The Marine Transfer Station Ramp must be abated and at least partially dismantled before work on the Sea Wall begins.
4. The Marine Transfer Station and Ramp can be abated and demolished starting upon mobilization.

B. Abatement phasing addresses abatement of the grossly contaminated Sealed Incinerator Rooms as a first environmental cleanup phase and the remainder of the abatement in subsequent phases. Environmental cleanup phasing is a subcomponent of the overall project phasing. The key tasks for the environmental cleanup phases are as follows.

1. Environmental Cleanup Phase I - Abatement and Hazardous Waste Removal (Sealed Incinerator Rooms) - ~~The work for the Sealed Incinerator Rooms will require asbestos abatement, hazardous waste removal, building decontamination, and the dismantlement of all equipment/structures related to the former trash burning use of the Site.~~ The work limits for this phase of the project include the Sealed Incinerator Rooms. During this cleanup and dismantlement phase, other portions of the facility could potentially be used by City of New York; however, the Sealed Incinerator Rooms work will involve a significant amount of truck traffic and a work force that will prevent City of New York from having full access to the M2 garage and outer areas that are currently used for parking City of New York trucks and equipment.

2. Pre-Dismantlement Activities

a) Prior to conducting any work (i.e., asbestos, environmental cleanup, or equipment dismantlement), the following activities should be performed.

1) All necessary permits, variances, and notifications will be obtained or made. These will include:

- a. Site Specific Health and Safety Plan (HASP);
- b. CAMP;
- c. Dust and Noise Mitigation Plan;
- d. Materials Handling Plan;
- e. Storm Water Pollution Prevention Plan (SWPPP);

- f. Applicable NYCDEP Asbestos Variances;
 - g. USEPA Notifications;
 - h. New York City Department of Buildings (NYCDOB) Demolition Permit(s);
 - i. NYCDOB/NYCDEP A-TRU Filings.
- 2) All Site utilities within the work area must be sealed or disconnected as required. Additionally, any remaining live electric panels and lines will require proper shielding or may have to be moved or rerouted prior to the start of the abatement, cleanup, or dismantlement work.
- 3) Based on the logistical issues with the building decontamination, NYCDEP approval will be required to complete the proposed asbestos abatement approach. A variance request for a waiver should be prepared. This variance will request modification or waiver on certain abatement items that are impractical and present an undue hardship on the City and contractor trying to complete the work. It is the Contractor's responsibility to seek variance approvals and there is no guarantee that modification or waiver will be granted by the NYCDEP, which functions independently from other Departments of the City of New York.
3. Asbestos Abatement and Hazardous Waste Removal - When the incinerator closed, a significant quantity of hazardous ash and debris was left in former accumulation areas such as the flues, furnaces, conveyor rooms, etc. In addition, a large amount of debris is present in the Sealed Incinerator Rooms. Ash mixed with dust currently covers equipment, floors, walls, and debris throughout the entire Sealed Incinerator Rooms. Analytical testing showed that this ash/dust is both an ACM and RCRA hazardous waste based on high metals content (lead and cadmium). Other ACM was noted throughout most of the Sealed Incinerator Rooms including, but not limited to, refractory brick, insulating board on furnaces, flues, and boilers, breaching material, window caulking, pipe insulation, pipe fittings, and wire insulation. Hazardous materials identified in the Sealed Incinerator Rooms also include oil bearing PCBs in equipment and on some building surfaces. In addition, many surfaces within the Sealed Incinerator Rooms are coated with bird excrement.
4. Decontamination Approach
- (a) The conceptual approach to the building decontamination is to divide the buildings into smaller critical areas. These critical areas are the main incinerator floor (operating floor and operating floor mezzanines, storage floor, and charging room floor), conveyor/residue removal room (ground floor), and the boiler room (ground floor). The first to be decontaminated is anticipated to be the main incinerator floor (with multi-level mezzanines), then followed by the ash removal room, and then finally the boiler room. The cleaning for all areas will be sequenced as follows:

- 1) Seal room from other portions of the facility using plywood and plastic sheeting;
 - 2) Place area under negative pressure;
 - 3) Remediate residual ash and debris residue using HEPA-equipped vacuum system;
 - 4) Proceed with removal of RCRA hazardous refractory brick and asbestos abatement of general ACM;
 - 5) Decontaminate and remove all equipment; and,
 - 6) Pressure wash interior surfaces.
- (b) Upon completion of decontamination, each area may be used as a decontamination and equipment staging area to support work in the next areas. Openings will be constructed in the Sealed Incinerator Rooms as needed to allow for the movement of equipment and waste to the loading area.
- (c) In general, the work in each of the critical areas will start with containment of the area and then proceed with ash/debris (which is ACM and hazardous waste) clean-up, hazardous materials (i.e., PCBs, LBP, drummed waste, etc.) removal/decontamination, abatement of remaining ACM (i.e., pipe insulation, duct work, wiring, insulating brick, etc.), and finally disinfecting/washing of all surfaces.
5. Environmental Cleanup Phase II – Abatement of the Remaining Buildings - After all remaining Site buildings have been gutted and cleaned, and all required permits have been obtained, building demolition shall proceed as detailed in the Division 2 specifications. Such activities will include: cleaning and asbestos abatement; demolition of the remaining on-site structures; and subsurface work.
6. Pre-Demolition Activities - Prior to conducting any work (i.e., asbestos, environmental cleanup, or demolition), the following pre-demolition activities should be performed:
- a) All necessary permits, variances and notifications will be obtained or made. These shall include:
 - 1) Site Specific HASP;
 - 2) CAMP;
 - 3) Dust and Noise Mitigation Plan;
 - 4) Materials Handling Plan;
 - 5) Erosion and Sediment Control Plan;
 - 6) SWPPP;
 - 7) Applicable NYCDEP Asbestos Variances;
 - 8) USEPA Notifications; and,
 - 9) NYCDOB Demolition Permit(s).
 - b) All Site utilities will be disconnected and sealed as required.
7. Cleaning and Asbestos Abatement of the Salt Shed, MTS, Ramp, M5 Garage and M2 Garage

- a) The MTS and Ramp can be abated and cleaned upon mobilization. Abatement and cleaning of the M2 Garage, M5 Garage and Salt Shed will not begin for approximately 9 months following mobilization.
- b) The buildings will be cleared of all debris, office furniture, supplies, mercury vapor lights, PCBs electrical equipment, ASTs, etc., prior to asbestos abatement. The abatement contractor will work floor by floor, commencing on the top floor of each structure to clear the debris and prepare the floors for abatement activities. Once the asbestos work areas have been contained per applicable regulations, the contractor will remove all friable and non-friable ACM. This abatement work will be performed in accordance with all applicable regulations and project Site specific variances. After all Site buildings have been tested and certified to be clear of any ACM, all oil-stained concrete floors should be washed.
- C. Subsurface Work. Following the completion of the demolition of the structures, all USTs, oil/water separators, and associated piping will be permanently closed by removal in accordance with applicable regulations. The Contractor will excavate a Site-wide 5-foot cut and will backfill the Site-wide cut with 5 feet of clean crushed stone in accordance with the agreement between the City and HRPT.

1.04 CONTRACTOR USE OF PREMISES:

- A. The Contractor shall conform site operations to all applicable laws, ordinances, permit requirements and Contract Documents.
- B. The Contractor is responsible for protection and safekeeping of his materials, products and equipment stored or used on premises until the contract is complete and accepted.
- C. The Contractor shall move as required all of Contractor's temporary facilities (i.e., field offices) stored materials, products, or equipment which interferes with operations of the City of New York or others.
- D. Staging areas for demolition vehicles and equipment shall be accommodated within the project limits.
- E. The Contractor is responsible for keeping adjacent roadways, aprons and entrances clear and available at all times. Such areas shall not be used for parking, loading, or storage.
- F. The Contractor is responsible for snow removal and storage within the project limits.
- G. Parking within the project limits is permissible providing the Contractor indemnifies and holds City of New York harmless.

1.05 QUALIFICATIONS:

- A. The low bidder shall demonstrate its responsibility to perform and complete all required work by submitting a statement of its experience and the experience of any subcontractor which the low bidder intends to use to perform the work. The low bidder must demonstrate a minimum of three years of experience and the completion of similar demolition/environmental remediation projects. The low bidder or the low bidder's subcontractor(s) must demonstrate the experience level for the various work elements as listed below:

Work Element	Experience Level
Asbestos Removal	3 Years*
Metals Contaminated Material Removal	2 years
Lead Based Paint Control/Removal (Industrial Cleaning)	2 years
Building and Equipment Decontamination	2 years
PCB-Bearing Equipment Removal/Cleaning	2 years
Chlorinated Fluorocarbon Containing Equipment Removal/Cleaning	2 years
Universal Waste Removal	2 years
Hazardous and Petroleum Waste Removal	2 years
Underground and Above Ground Storage Tank Removal	2 years
Excavation of Contaminated Soil	2 years
Hazardous Waste Removal	2 years

* Must have all required licenses and certifications

1.06 DEFINITIONS:

The following terms shall have the meanings ascribed to them in this Section, wherever they appear in the Contract Documents. Other definitions may be included in various sections of the specifications:

Abatement: Procedures to control or decrease fiber release from asbestos-containing building materials or insulation material containing asbestos. Includes removal, enclosure, and encapsulation.

Aggressive Sampling: Air monitoring samples collected while a leaf blower, fans, or other such devices are used to generate air turbulence within the work area.

Air Filtration Device (AFD): A portable local exhaust system equipped with HEPA filtration, capable of maintaining a constant low velocity air flow into contaminated areas from adjacent, uncontaminated areas and capable of maintaining a negative air pressure with respect to the adjacent, uncontaminated areas.

Air Lock: A system for permitting ingress or egress to the work area while permitting minimal air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways placed a minimum of three feet apart.

Air Monitoring: The process of measuring the fiber content of a specific volume of air in a stated period of time. Personal air sampling results shall be calculated to reflect the employee's eight-hour time

weighted average (TWA) exposure. Area sampling results are reported directly, without calculating the TWA.

AISC: American Institute of Steel Construction

Amended Water: Water to which a surfactant has been added.

ANSI: American National Standard Institute

Asbestos-Containing Material (ACM): Any material or product which contains more than 1 percent asbestos by weight.

Asbestos Removal Encapsulant: A chemical solution used in place of amended water during asbestos removal to penetrate, bind, and encapsulate the asbestos-containing material.

ASCE: American Society of Civil Engineers

ASTM: American Society for Testing and Materials

Authorized Visitor: Authorized visitors shall receive approval to enter the Site from the City of New York. The Safety officer has primary responsibility on determining who is qualified and may enter the Site. The Site Safety Officer shall only allow authorized visitors with written proof that they have been medically certified and trained in accordance with 29 CFR 1910.120 to enter the contamination reduction zone and/or exclusion area.

Certified Industrial Hygienist (CIH): One certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene.

CFR: Code of Federal Regulations

Class II asbestos work: Activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic. Class I asbestos work includes the removal of thermal system or surfacing materials.

Cleanup of ash, dust, residue and debris: Cleaning activities which involve the removal of waste containing ash in the incinerator. These activities shall minimize the generation and potential migration of ash/dust and any water used for cleaning.

Competent Person: Definition and responsibilities as set down in 29 CFR 1926.1101(b) and as outlined herein.

Construction Project Manager: Term used in particularly in Asbestos Abatement to identify the individual or business enterprise hired by the City of New York to oversee the project work. The Construction Project Manager serves as the representative of the City of New York at the site and, subject to review by the Commissioner, is responsible for the inspection, management, coordination

and administration of the required construction work. Where the term Construction Project Manager is used in the Contract Specifications or Drawings, it shall be read as Commissioner.

Contaminated ash, dust, and debris: Any residue from previous facility operations that has settled on interior surfaces of the incinerator. This material has been analyzed or assumed to contain high levels of asbestos, cadmium and lead (above TCLP hazardous waste limits).

Contamination Reduction Zone: An area at the Exit Point of the Exclusion Zone through which all personnel, vehicles, and equipment must enter and exit. All decontamination of vehicles and equipment and removal of personal protective clothing and breathing apparatus must take place at the boundary between the Exclusion Zone and the Contamination Reduction Zone.

Contractor Support Zone: An area of the Contractor Work Area outside the Exclusion Zone, accessible for deliveries and visitors. No persons, vehicles, or equipment may enter these areas from the Exclusion Zone without having gone through specified decontamination procedures in the adjacent Contamination Reduction Zone.

Contractor Work Area: An area of the project Site including the Support Zone, staging area, and Exclusion Zone.

Curtained Doorway: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.

Decontamination Enclosure System: A series of connected rooms for the decontamination of workers (a Personnel Decontamination Enclosure System) or of materials and equipment (Equipment Decontamination Enclosure System).

Disturbed Concrete: Any concrete damages as the result of the demolition activities.

Drainage System: Piping and appurtenances required to convey sewage, storm water, and liquid waste from plumbing fixtures, equipment and drains to a point of discharge outside the building.

Encapsulant (Sealant): A liquid material which can be applied to ACM and which 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).

Encapsulation: Application of an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the ambient air.

Enclosure: Procedures necessary to completely enclose ACM behind air-tight, impermeable, permanent barriers.

Equipment Decontamination Enclosure System: A decontamination system for waste materials and equipment, typically consisting of a designated area of the work area, a washroom, and a holding area,

with an air lock between any two adjacent rooms and a curtained doorway between the holding area and the non-work area. Not to be used for personnel entry/exit.

Fixed Equipment: Items within the building that are fastened to the building structure and cannot be moved wholly.

Semi-Fixed Equipment: Items within the building that are mechanically fastened to the building structure and can be detached with mechanical hand tools.

Non-Fixed Equipment: Items within the building that are not fastened to the building structure.

Environmentally Clean Fill and Backfill: Clean fill that has been tested and found to contain levels of organic compounds or inorganic analytes that do not exceed NYSDEC 6 NYCRR Part 375 Unrestricted Use ("Track 1") Soil Cleanup Objectives. Prior to importation, the soil will be certified clean by chemical analysis to meet the requirements of NYSDEC prior to placement at the Site. To demonstrate that the imported Fill meets project approval criteria, the Contractor will be responsible for providing proposed source sampling data at a frequency of one sample for every 500 cubic yards. The samples will be analyzed for target compound list VOCs, SVOCs, pesticides, PCBs and target analyte list metals by a NYSDOH ELAP- certified laboratory at no additional cost to the City.

Exclusion Zone: The innermost area within the Contractor Work Area that encloses the area of contamination (i.e., interior of the incinerator building). Protective clothing and breathing apparatus as specified in the health and safety requirements and in the Contractor's approved HASP must be worn.

Exclusion Limit (EL): The EL is an airborne concentration of asbestos to which no employee shall be exposed when not using respiratory protection. The EL is 1.0 f/cc as averaged over a 30 minute period.

Fixed Object: A unit of equipment or furniture in the work area which cannot be removed from the work area.

Floor Drains and Sumps: Piping, connections and valves used for purpose of water or sludge removal and other forms of deposits from tanks, heaters, regulator bodies, and low points in concrete flooring systems.

Friable: Any material which, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and/or mechanical means.

Full Face piece High Efficiency Respirator (FFHER): A respirator which covers the wearer's entire face from the hairline to below the chin and which is equipped with a HEPA filter.

Half Mask High Efficiency Respirator (HMHER): A respirator which covers one-half of the wearer's face, from the bridge of the nose to below the chin, and is equipped with HEPA filters.

Hazardous Waste: A solid waste material that exhibits one or more of the following characteristics: ignitability, corrosivity, reactivity, and toxicity as defined in 40 CFR, Part 261.20 Subpart C - Characteristics of Hazardous Waste. Materials that are pre-defined and categorized in the cited CFR are

also considered to be hazardous wastes. Hazardous waste ash and refractory brick is present throughout the Sealed Incinerator Rooms. Hazardous waste soil is not known to be present at the Site; however, the Contractor is to provide unit cost pricing (on a per-ton basis) for hazardous waste soil excavation and disposal (including all handling, removal, transport and disposal costs) as a contingency item.

Health and Safety Coordinator (HSC): The HSC shall be a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) retained by the Contractor. The HSC shall be responsible for the development and implementation of the HASP.

Health and Safety Technicians (HST): The HST(s) shall be the Contractor's on-site personnel who shall assist the SO in the implementations of the HASP, in particular, with air monitoring in active work areas and maintenance of safety equipment.

HEPA Filter: A high efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97 percent of the fibers of 0.3 micrometer or larger in diameter.

HEPA Vacuum Equipment: High efficiency particulate air (HEPA) filtered vacuuming equipment having a UL 586 filter system capable of collecting and retaining asbestos fibers.

Large Asbestos Project: Large asbestos project shall mean an asbestos project involving the disturbance (e.g. removal, enclosure, encapsulation) of 260 linear feet or more of friable asbestos-containing material or 160 square feet or more of friable asbestos containing material.

Lockdown: Procedure of applying an encapsulant as a protective coating or sealant to a surface from which ACM has been removed in order to control and minimize airborne asbestos fiber generation that might result from residual asbestos-containing debris.

Mechanical: General term applicable to conveyor systems, HVAC, plumbing, sprinkler, furnace equipment, boiler equipment and dust collection equipment.

Medical Consultant (MC): The MC is a physician retained by the Contractor who shall be responsible for conducting physical exams as specified under the medical Monitoring Programs in this section.

Minor Asbestos Project: Minor project shall mean a project involving the disturbance (e.g. removal, enclosure, encapsulation, repair) of 25 linear feet or less of friable asbestos-containing material or 10 square feet or less of friable asbestos-containing material.

Monitoring: The use of direct reading field instrumentation to provide information regarding the levels of gases or particulates which are present during remedial action. Monitoring shall be conducted to evaluate employee exposures to toxic materials, including metals in respirable dust, petroleum related vapors, and hazardous conditions.

Movable Object: A unit of equipment or furniture which can be removed from the work area.

MSDS: Material Safety Data Sheet

NFPA: National Fire Protection Association

Non-Hazardous Excavated Material: Material that may include or contain mixtures of the following: soil (including natural undisturbed material), debris, concrete and concrete products (including steel or fiberglass reinforcing rods that are embedded in the concrete), asphalt pavement, brick, glass, rock, and incidental ash. This material may also include Construction and Demolition (C&D) debris defined in Title 6 New York Codes, Rules and Regulations Part 360-7.1(b)(i). All excavated or removed materials are scheduled to be disposed of as non-hazardous excavated material which will exceed 6 NYCRR Part 375 Restricted Residential Use ("Track 2") Soil Cleanup Objectives and handling, removal and disposal (including all related work described in this Section) of these materials are to be included in the Contractor's base bid.

NYCRR: New York Code of Rules and Regulations

OSHA: United States Occupational Safety and Health Administration Permissible Exposure Limit (PEL): The PEL is an airborne concentration of ACM to which no employee shall be exposed when not using respiratory protection. The OSHA PEL is 0.1 f/cc expressed on an 8-hour time weighted average (TWA).

Personnel Decontamination Enclosure System: A decontamination system for personnel and limited equipment, typically consisting of an equipment room, shower room, and clean room, with an air lock between any two adjacent rooms, and a curtained doorway between the equipment room and the work area, and a curtained doorway between the clean room and the non-work area. The decontamination system serves as the only entrance/exit for the work area.

Petroleum-Contaminated Soil: Soil or sediment which contains a petroleum source such as a UST or piping and which contains substantial quantities of mobile petroleum contamination that is identifiable either visually, through strong odor, by elevated contaminant vapor or is otherwise readily detectable without laboratory analysis. Petroleum contaminated soil is not known to be present at the site, however, the Contractor is to provide unit cost pricing (on a per-ton basis) for petroleum contaminated soil disposal (including all handling, removal, transport and disposal costs) as a contingency item.

Piping: This term includes pipe, tube and appurtenant fittings, flanges, valves, traps, hangers, and supports and associated thermal insulation.

Pits: All rectangular or irregular shaped low points within the concrete floor slab which were used to collect fluids or to house equipment.

Plasticize: To cover floors and walls with plastic sheeting as herein specified.

Powered Air Purifying Respirator (PAPR): Either a full face-piece, helmet, or hooded respirator that powers breathing air to the wearer after the air has been purified through a HEPA filter.

PPE: Personal Protective Equipment

Project Monitor: New York City Department of Sanitation's Third Party air monitoring consultant who is authorized to perform air sampling and industrial hygiene inspection of the work.

Project Site: The portion of the facility where decontamination, asbestos abatement, dismantlement and other project work shall be performed by the Contractor.

Regulated Area: An area established by the employer to demarcate areas where Class I, II and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and, a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

Removal: The act of removing and transporting asbestos-containing or asbestos- contaminated materials from the work area to a suitable disposal site.

Remove: Remove and legally dispose of items except those indicted to be reinstalled, salvaged, or to remain the property of City of New York.

Resident Engineer: Individual or business enterprise hired by the City of New York to oversee the project work. The Resident Engineer serves as the representative of the City of New York at the site and, subject to review by the Commissioner, is responsible for the inspection, management, coordination and administration of the required construction work. Where the term Resident Engineer is used in the Contract Specifications or Drawings, it shall be read as Commissioner.

Safety Officer (SO): The SO shall be the Contractor's on-site person who shall be responsible for the day-to-day implementation and enforcement of the HASP.

Small Asbestos Project: Small asbestos project shall mean an asbestos project involving the disturbance (e.g. removal, enclosure, encapsulation) of more than 25 and less than 260 linear feet of friable asbestos-containing material or more than 10 and less than 160 square feet of friable asbestos-containing material.

Staging Areas: Areas within the Exclusion Zone for the temporary staging of contaminated materials.

Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

TCLP: Toxicity Characteristic Leaching Procedure

Tent Procedure: A method of limited application for the removal at any one time of less than 260 linear feet or 160 square feet of ACM. Tent procedures shall be accomplished in a constructed or commercially available plastic tent, plasticizing and sealing all surfaces not being abated within the periphery forming an enclosure. The tent shall be of 2 layers of 6-mil plastic at a minimum, with seams stapled and taped airtight and then taped flush with the adjacent tent wall. Engineering control shall include a HEPA unit to continuously exhaust the work area. Negative air shall be demonstrated by smoke test.

Trenches: All elongated concrete lined collection features in the floor slab of the work area including subsurface ash conveyors and fluid collection systems.

Type C Respirator: A respirator which supplies air to the wearer from a source outside the work area by means of a compressor.

USDOT: United States Department of Transportation

USEPA: United States Environmental Protection Agency

Wash Water: Rinse water from the building decontamination operations

Water, High Temperature: Water with a supply water temperature above 350°F.

Water, Hot: Water with a temperature above 80°F

Wet Cleaning: The process of eliminating asbestos and metals contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with amended water or asbestos removal encapsulant and by afterwards disposing of these cleaning tools as asbestos/metals-contaminated waste.

Work Area: Designated rooms, spaces, or areas of the project where asbestos/metals abatement, environmental cleanup and dismantlement actions are to be undertaken or which may become contaminated as a result of such actions. A contained work area has been sealed, plasticized, and equipped with an airlock entrance or a decontamination enclosure system.

Work: Work includes all labor, materials, and other items that are shown, described, or implied in the Contract and includes all extra and additional work and material that may be ordered by Commissioner.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 02 00 20

ENVIRONMENTAL HEALTH AND SAFETY

PART 1 - HEALTH AND SAFETY

1.01 DESCRIPTION:

- A. The Contractor is responsible and liable for the health and safety of all on-site personnel and off-site community impacted by the demolition and remediation work.
- B. This section describes the minimum health and safety requirements for this project including the requirements for the development of written Health and Safety Plan (HASP). All on-site workers must comply with the requirements of the HASP. The Contractor's HASP must comply with all applicable federal and state regulations protecting human health and the environment from the hazards posed by activities during this Site remediation and the "New York City Department of Design and Construction Safety Requirements". The HASP is a required deliverable for this project. The HASP shall be reviewed by the Commissioner. The Contractor shall resubmit the HASP, addressing all review comments from the Commissioner. The Contractor shall not initiate on-site work in contaminated areas until an approved HASP addressing all comments has been issued.
- C. Consistent disregard for the provision of these health and safety specifications shall be deemed just and sufficient cause for immediate stoppage of work and/or termination of the Contract or any Subcontract without compromise or prejudice to the rights of the City of New York or Commissioner. Emergency Suspension of Work procedures are specified in the General Conditions.
- D. Any discrepancies between the HASP and the specifications shall be resolved in favor of the more stringent requirements as determined by the Commissioner.
- E. All contractor and sub-contractor employees who are required by law or regulation, based on the work activity they are to perform, to meet training, testing, and medical monitoring requirements including 40-hour OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) training, annual 8-hour OSHA HAZWOPER refresher training, annual medical physicals, NYCDEP/NYS DOL asbestos certifications, and respirator fit tests must have that training, testing, and medical monitoring completed and documented before beginning the work.

1.02 BASIS:

- A. The Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (29 CFR 1910 and 1926) and subsequent additions and/or modifications, the New York State Labor Law Section 876 (Right-to-Know Law), the Standard Operating Safety Guidelines by the USEPA, Office of Emergency and Remedial Response and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCG, and USEPA) provide the basis for the safety and health program. Additional specifications within this section are in addition to OSHA regulations and reflect the positions of both the USEPA and the National Institute for Occupational Safety and Health (NIOSH) regarding procedures required to ensure safe operations at hazardous waste sites.
- B. The safety and health of the public and project personnel and the protection of the environment shall take precedence over cost and schedule considerations for all project work. Any additional costs shall be considered only after the cause for suspension of operations is addressed and work is resumed. The Commissioner's on-site representative and the Contractor's Superintendent shall be kept apprised, by the Safety Officer, of conditions which may adversely affect the safety and health of project personnel and the community. The Commissioner may stop work for health and safety reasons. If work is suspended for health and/or safety reasons, it shall not resume until approval is obtained from the Commissioner. The cost of work stoppage due to health and safety is the responsibility of the Contractor under this Contract.

1.03 HEALTH AND SAFETY DEFINITIONS:

The following definitions shall apply to the work of this Contract:

- A. **Project Personnel:** Project personnel include the Commissioner's onsite and off-site personnel and representatives, the Contractor, Subcontractors, and Federal and State Representatives, working or having official business at the project Site.
- B. **Authorized Visitor:** Authorized visitor who work for the State of New York shall receive approval to enter the Site from the City of New York. The Safety Officer has primary responsibility on determining who is qualified and may enter the Site. The Site Safety Officer shall only allow authorized visitors with written proof that they have been medically certified and trained in accordance with 29 CFR 1910.120 to enter the contamination reduction zone and/or exclusion area.

- C. Health and Safety Coordinator (HSC): The HSC shall be a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) retained by the Contractor. The HSC shall be responsible for the development and implementation of the HASP.
- D. Safety Officer (SO): The SO shall be the Contractor's on-site person who shall be responsible for the day-to-day implementation and enforcement of the HASP.
- E. Health and Safety Technicians (HST): The HST(s) shall be the Contractor's on-site personnel who shall assist the SO in the implementations of the HASP, in particular, with air monitoring in active work areas and maintenance of safety equipment.
- F. Medical Consultant (MC): The MC is a physician retained by the Contractor who shall be responsible for conducting physical exams as specified under the medical Monitoring Programs in this section.
- G. Project Site: The area designated on the Project Drawings, which includes the Contractor Work Area.
- H. Contractor Work Area: An area of the project Site including the Support Zone, staging area, and Exclusion Zone.
- I. Contractor Support Zone: An area of the Contractor Work Area outside the Exclusion Zone, accessible for deliveries and visitors. No persons, vehicles, or equipment may enter these areas from the Exclusion Zone without having gone through specified decontamination procedures in the adjacent Contamination Reduction Zone.
- J. Staging Areas: Areas within the Exclusion Zone for the temporary staging of contaminated materials.
- K. Exclusion Zone: The innermost area within the Contractor Work Area that encloses the area of contamination (i.e., interior of the incinerator building). Protective clothing and breathing apparatus as specified in the health and safety requirements and in the Contractor's approved HASP must be worn.
- L. Contamination Reduction Zone: An area at the Exit Point of the Exclusion Zone through which all personnel, vehicles, and equipment must enter and exit. All decontamination of vehicles and equipment and removal of personal protective clothing and breathing apparatus must take place at the boundary between the Exclusion Zone and the Contamination Reduction Zone.

- M. Commissioner's On-Site Representative: Representative assigned responsibility and authority by Commissioner for day-to-day field surveillance duties.
- N. Work: Work includes all labor, materials, and other items that are shown, described, or implied in the Contract and includes all extra and additional work and material that may be ordered by Commissioner.
- O. Monitoring: The use of direct reading field instrumentation to provide information regarding the levels of gases and/or vapor, which are present during remedial action. Monitoring shall be conducted to evaluate employee exposures to toxic materials, including metals in respirable dust, petroleum related vapors, and hazardous conditions.

1.04 RESPONSIBILITIES:

- A. Commissioner shall be responsible for the following:
 - 1. Reviewing the HASP for the acceptability for its personnel and the impact on the Site and human health. The Commissioner's approval of the HASP does not relieve the Contractor of his overall responsibility and liability for the health and safety of all on-site personnel and the off-site community.
 - 2. Reviewing modifications to the HASP.
- B. The Contractor shall be responsible for the following:
 - 1. The Contractor shall perform all work required by the Contract Documents in a safe and environmentally acceptable manner. The Contractor shall provide for the safety of all project personnel and the community for the duration of the Contract.
- C. The Contractor must:
 - 1. Employ an SO who shall be assigned full-time responsibility for all tasks herein described under this HASP. In the event the SO cannot meet his responsibilities, the Contractor shall be responsible for obtaining the services of an "alternate" SO meeting the minimum requirements and qualifications contained herein. No work shall proceed on this project in the absence of an approved SO.
 - 2. Ensure that all project personnel have obtained the required physical examination prior to and at the termination of work covered by the contract.

3. Be responsible for the pre-job indoctrination of all project personnel with regard to the HASP and other safety requirements to be observed during work, including but not limited to (a) potential hazards, (b) personal hygiene principals, (c) personal protection equipment, (d) respiratory protection equipment usage and fit testing, and (e) emergency procedures dealing with fire and medical situations.
4. Be responsible for the implementation of this HASP, and the Emergency Contingency and Response Plan.
5. Provide and ensure that all project personnel are properly clothed and equipped and that all equipment is kept clean and properly maintained in accordance with the manufacturer's recommendations or replaced as necessary.
6. Alert appropriate emergency services before starting any hazardous work and provide a copy of the Emergency Contingency Plan to the respective emergency services.
7. Have sole and complete responsibility of safety conditions for the project, including safety of all persons (including employees)
8. Be responsible for protecting the project personnel and the general public from hazards due to the exposure, handling, and transport of contaminated materials. Barricades, shielding lanterns, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times.
9. Ensure all OSHA health and safety requirements are met.
10. Maintain a chronological log of all persons entering the project Site. It shall include organization, date, and time of entry and exit. Each person must sign in and out.

1.05 SITE SAFETY PLAN:

- A. The Site Safety Plan, also referred to as Health and Safety Plan (HASP), is a deliverable product of this project. The HASP shall meet all the requirements of the "New York City Department of Design and Construction Safety Requirements" and any additional requirements specified in this Section. Commissioner shall review and comment on the Contractor's HASP. Agreed upon responses to all comments shall be incorporated into the final copy of the HASP. The HASP shall govern all work performed for this Contract. The HASP shall address, at a minimum, the following items in accordance with 29 CFR 1910.120(i)(2):

1. Health and Safety Organization
2. Site Description and Hazard Assessment
3. Training
4. Medical Surveillance
5. Work Areas
6. Standard Operating Safety Procedures and Engineering Controls
7. Personal Protective Equipment (PPE)
8. Personnel Hygiene and Decontamination
9. Equipment Decontamination
10. Air Monitoring
11. Emergency Equipment/First Aid Requirements
12. Emergency Response and Contingency Plan
13. Confined-Space Entry Procedures
14. Spill Containment Plan
15. Heat & Cold Stress
16. Record Keeping
17. Community Protection Plan

- B. The following sections shall describe the requirements of each of the above-listed elements of the HASP.

1.06 HEALTH AND SAFETY ORGANIZATION:

- A. The Contractor shall list in the HASP a safety organization with specific names and responsibilities. At a minimum, the Contractor shall provide the services of a Health and Safety Coordinator, SO, Health and Safety Technician, and a Medical Consultant.
- B. Health and Safety Coordinator: The Contractor must retain the services of a Health and Safety Coordinator (HSC). The HSC must be an America Board of Industrial Hygiene (ABIH), Certified Industrial Hygienist (CIH), or a Certified Safety Professional (CSP). The HSC must have a minimum of two year's experience in hazardous waste site remediation or related industries and have a working knowledge of federal and state occupational health and safety regulations. The HSC must be familiar with air monitoring techniques and the development of health and safety programs for personnel working in potentially toxic atmospheres.
- C. In addition to meeting the above requirements the HSC shall have the following responsibilities:

1. Responsibility for the overall development and implementation of the HASP.
 2. Responsibility for the initial training of on-site workers with respect to the contents of the HASP.
 3. Availability during normal business hours for consultation by the SO.
 4. Availability to assist the SO in follow-up training and if changes in Site conditions occur.
- D. Safety Officer: The designated SO must have, at a minimum, two years of experience in the remediation of hazardous waste sites or related field experience. The SO must have formal training in health and safety and be conversant with federal and state regulations governing occupational health and safety. The SO must be certified in CPR and first aid and have experience and training in the implementation of personal protection and air monitoring programs. The SO must have "hands-on" experience with the operation and maintenance of real-time air monitoring equipment. The SO must be thoroughly knowledgeable of the operation and maintenance of air-purifying respirators (APR) and supplied-air respirators (SAR) including SCBA and airline respirators.
- E. In addition to meeting the above qualifications, the SO shall be responsible for the following minimum requirements:
1. Responsibility for the implementation, enforcement, and monitoring of the health and safety plan.
- F. Responsibility for the pre-construction indoctrination and periodic training of all on-site personnel with regard to this safety and other safety requirements to be observed during construction, including:
1. Potential hazards
 2. Personal hygiene principles
 3. PPE
 4. Respiratory
 5. Emergency procedures dealing with fire and medical situations
 6. Conduct daily update meetings in regard to health and safety
- G. Responsibility for alerting Commissioner prior to the Contractor starting any particular hazardous work.
- H. Responsibility for informing project personnel of the New York State Labor Law Section 876 (Right-to-Know Law).

- I. Responsibility for the maintenance of separation of Exclusion Zone (Dirty) from the Support Zone (Clean) areas as described hereafter.
- J. Health and Safety Technicians: The Health and Safety Technician (HST) must have one year of hazardous waste site or related experience and be knowledgeable of applicable occupational health and safety regulations. The HST must be familiar with the operations, maintenance and calibration of monitoring equipment used in this remediation. An HST shall be assigned to each work crew or task in potentially hazardous areas.
- K. Medical Consultant: The Contractor is required to retain a Medical Consultant (MC) who is a physician, certified in occupational medicine. The physician shall have experience in the occupational health area and shall be familiar with potential site hazards of remedial action projects. The MC shall also be available to provide annual physicals and to provide additional medical evaluations of personnel when necessary.

1.07 SITE DESCRIPTION AND HAZARD ASSESSMENT:

- A. The Contractor shall perform a hazard assessment to provide information to assist in selection of PPE and establish air monitoring guidelines to protect on-site personnel, the environment, and the public. The Contractor shall provide a general description of the Site, its location, past history, previous environmental sampling results, and general background on the conditions present at the Site.
- B. Chemical Hazards: A qualitative evaluation of chemical hazards shall be based on the following:
 - 1. Nature of potential contaminants;
 - 2. Location of potential contaminants at the project Site;
 - 3. Potential for exposure during Site activities; and,
 - 4. Effects of potential contaminants on human health.
- C. Biological Hazards: A qualitative evaluation of biological hazards consisting of the elements listed for chemical hazards.
- D. Physical Hazards: The Contractor shall assess the potential for physical hazards affecting personnel during the performance of on-site work.
- E. The Contractor shall develop a hazard assessment for each Site task and operation established in the HASP.

1.08 OSHA TRAINING:

- A. The Contractor is responsible to ensure that all project personnel have been trained in accordance with OSHA 1910.120 regulations based on the work activity they are to perform. All personnel who work within the metals and asbestos contaminated portions of the buildings must have the appropriate NYCDEP/NYS DOL asbestos certifications, 40-hour OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) training, and annual 8-hour OSHA HAZWOPER refresher training.
- B. The Contractor shall ensure that all employees are informed of the potential hazards of toxic chemicals to the unborn child and the risks associated with working at the project Site.
- C. The Contractor shall be responsible for, and guarantee that, personnel not successfully completing the required training are not permitted to enter the project Site to perform work.

1.09 SAFETY MEETINGS:

- A. The SO shall conduct daily safety meetings that shall be mandatory for all project personnel. The meetings shall provide refresher courses for existing equipment and protocols, and shall examine new Site conditions as they are encountered.
- B. Additional safety meetings shall be held as required by the General Conditions.
- C. Should any unforeseen or Site-particular safety-related factor, or condition become evident during the performance of work at this Site, the Contractor shall bring such to the attention of the SO in writing as quickly as possible for resolution. In the interim, the Contractor shall take prudent action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.

1.10 MEDICAL SURVEILLANCE:

- A. The Contractor shall utilize the services of a Physician to provide the minimum medical examinations and surveillance specified herein. The name of the Physician and evidence of examination of all Contractor and Subcontractor on-site personnel shall be kept by the SO.
- B. The Contractor and Subcontractor project personnel involved in this project shall be provided with medical surveillance prior to onset of work. Immediately at the conclusion of this project, and at any time there is suspected excessive exposure to substances that would be medically detectable, all project personnel shall be medically monitored. The costs for these

medical exams, including state field representatives, (four maximum) are to be borne by the Contractor.

- C. Physical examinations are required for:
 - 1. Any and all personnel entering hazardous or transition zones or performing work that required respiratory protection.
 - 2. All Contractor personnel on-site who are dedicated or may be used for emergency response purposes in the Exclusion Zone.
 - 3. Contractor supervisors entering hazardous or transition zones, or on-site for more than 16 hours during the length of the contract.
- D. Physical examinations are not required for people making periodic deliveries provided they work no more than 16 hours at site hazardous areas during the length of the contract.
- E. In accordance with good medical practice, the examining Physician or other appropriate representative of the Physician shall discuss the results of such medical examination with the individual examined. Such discussions shall include an explanation of any medical condition which the Physician believes would be adversely affected by such individual's employment at the project Site. A written report of such examination shall be transmitted to the individual's private physician upon written request by the individual.
- F. The examining Physician or Physician group shall notify the SO in writing that the individual has received a medical examination and shall advise the SO as to any specific limitations upon such individual's ability to work at the project Site that were identified as a result of the examination. Appropriate action shall be taken in light of the advice given pursuant to this subparagraph.
- G. The physical examination shall also include, but not be limited to, the following minimum requirements:
 - 1. Complete blood profile;
 - 2. Blood chemistry to include lead, chloride, CO₂, potassium, sodium, BUN, glucose, globulin, total protein, albumin, calcium, cholesterol, alkaline phosphatase, triglycerides, uric acid, creatinine, total bilirubin, phosphorous, lactic dehydrogenase, SGPT, and SGOT. All Contractor personnel working within the exclusion zone during the demolition activities of the Sealed Incinerator Rooms shall also have heavy metals screening for cadmium, chromium, mercury, and lead. Blood screening for heavy metals shall be performed prior to the start of project work and at the completion of project

work. Lead and metals blood screening shall comply with all OSHA requirements including 29CFR 1926.62 and 29CFR and 1926.1127.

3. Urinalysis;
4. "Hands on" physical examination to include a complete evaluation of all organ systems including any follow-up appointments deemed necessary in the clinical judgment of the examining physician to monitor any chronic conditions or abnormalities;
5. Electrocardiogram;
6. Chest X-ray (if recommended by examining physician in accordance with good medical practice);
7. Pulmonary function;
8. Audiometry - To be performed by a certified technician, audiologist, or physician. The range of 500 to 8,000 hertz should be assessed.
9. Vision Screening: Use a battery (TITMUS) instrument to screen the individual's ability to see test targets well at 13 to 16 inches and at 20 feet. Tests should include an assessment of muscle balance, eye coordination, depth perception, peripheral vision, color discrimination, and tonometry.
10. Tetanus booster shot (if no inoculation has been received within the last five years); and,
11. Complete medical history.

1.11 SITE CONTROL:

A. Security:

1. Security shall be provided and maintained by the Contractor. The gate shall be locked after each day's work is completed.
2. Security identification, specific to the project Site, shall be provided by the Contractor for all project personnel entering the project Site. The Contractor shall be responsible for and ensure that such identification shall be worn by each individual, visible at all times, while the individual is on-site. Vehicular access to the Site, other than to designated parking areas, shall be restricted to authorized vehicles only.
3. Use of on-site designated parking areas shall be restricted to vehicles of Commissioner and his representatives, Contractor, subcontractor, and service personnel assigned to the Site and actually on duty but may also be used on a short-term basis for authorized visitors.
4. The Contractor shall be responsible for maintaining a log of security incidents and visitor access granted.
5. The Contractor shall require all personnel having access to the project Site to sign-in and sign-out, and shall keep a record of all Site access.

6. All approved visitors to the Site shall be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit.
 7. Site visitors shall not be permitted to enter the hazardous work zone unless approved by the City of New York with appropriate site access agreement.
 8. Project Site shall be posted, "Warning Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence or equal at a minimum. Warning signs shall be posted at a minimum of every 50 feet.
 9. The Contractor shall provide the following site control procedures as a minimum:
 - a. A site map;
 - b. A map showing site work zones;
 - c. The use of a "buddy system"; and,
 - d. Standard operating procedures or safe work practices.
- B. The Contractor shall clearly lay out and identify work areas in the field and shall limit equipment, operations and personnel in the areas as defined below.
1. Exclusion Zone (EZ) - This shall include all areas where potential environmental monitoring has shown or it is suspected that a potential hazard may exist to workers. The level of PPE required in these areas shall be determined by the SO after air monitoring and on-site inspection has been conducted. The area shall be clearly delineated from the decontamination area. As work within the hazardous zone proceeds, the delineating boundary shall be relocated as necessary to prevent the accidental contamination of nearby people and equipment. The EZ shall be delineated by building walls or temporary plywood barriers.
 2. Contamination Reduction Zone - This zone shall occur at the interface of "Hazardous" and "Clean" areas and shall provide for the transfer of equipment and materials from the Support Zone to the Exclusion Zone, the decontamination of personnel and clothing prior to entering the "Clean" area, and for the physical segregation of the "Clean" and "Hazardous" areas. This area shall contain all required emergency equipment, etc. This area shall be clearly delineated by fencing or plywood barriers. It shall also delineate any areas that although not contaminated at a particular time may become so at a later date.

Support Zone - This area is the remainder of the work Site and project Site. The Support Zone shall be clearly delineated and procedures implemented to prevent active or passive contamination from the work Site. The function of the Support Zone includes:

- a. An entry area for personnel, material, and equipment to the Exclusion Zone of Site operations through the Contamination Reduction Zone;
- b. An exit for decontamination personnel, materials, and equipment from the "Decontamination" area of Site operations;
- c. The housing of Site special service; and,
- d. A storage area for cleaning, safety, and work equipment.

1.12 STANDARD OPERATING SAFETY PROCEDURES, ENGINEERING CONTROLS:

A. General SOP

1. The Contractor shall ensure that all safety equipment and protective clothing is kept clean and well maintained.
2. All prescription eyeglasses in use on this project shall be safety glasses and shall be compatible with respirators. No contact lenses shall be allowed on-site.
3. All disposable or reusable gloves worn on the Site shall be approved by the SO.
4. During periods of prolonged respirator use in contaminated areas, respirator filters shall be changed upon breakthrough. Respirator filters shall always be changed daily.
5. Footwear used on-site shall be covered by rubber over-boots or booties when entering or working in the Exclusion Zone area or Contamination Reduction Zone. Boots or booties shall be washed with water and detergents to remove dirt and contaminated sediment before leaving the Exclusion Zone or Contamination Reduction Zone.
6. All PPE used on-site shall be decontaminated or disposed of at the end of the work day. The SO shall be responsible for ensuring decontamination of PPE before reuse.
7. All respirators shall be individually assigned and not interchanged between workers without cleaning and sanitizing.
8. The Contractor, subcontractor and service personnel unable to pass a fit test as a result of facial hair or facial configuration shall not enter or work in an area that required respiratory protection.
9. The Contractor shall ensure that all project personnel shall have vision or corrected vision to at least 20/40 in one eye.
10. On-site personnel found to be disregarding any provision of this plan shall, at the request of the SO, be barred from the project.
11. Used disposable outerwear such as coveralls, gloves, and boots shall not be reused. Used disposable outerwear shall be removed upon leaving the hazardous work zone. And shall be placed inside disposable containers provided for that purpose. These containers shall be stored at the Site at the designated staging area and the Contractor shall be responsible for proper disposal of these materials at the completion of the project. This cost shall be borne by the Contractor.
12. Protective coveralls that become torn or badly soiled shall be replaced immediately.

13. Eating, drinking, chewing gum or tobacco, smoking, etc., shall be prohibited in the Exclusion Zone and Contamination Reduction Zone.
14. All personnel shall thoroughly cleanse their hands , face, and forearms and other exposed areas prior to eating, smoking, or drinking.
15. Workers who have worked in a hazardous work zone shall shower at the completion of the work day.
16. All personnel shall wash their hands, face, and forearms before using toilet facilities.
17. No alcohol, firearms or drugs (without prescriptions) shall be allowed on-site at any time.
18. All personnel who are on medication should report it to the SO who shall make a determination whether or not the individual shall be allowed to work and in what capacity. The SO may require a letter from the individual's personal physician stating what limitations (if any) the medication may impose on the individual.

B. Engineering Controls - Air Emissions

The Contractor shall provide all equipment and personnel necessary to monitor air emissions for asbestos, metals and organic vapors (appropriate to the work being conducted) and control air emissions.

1.13 PERSONAL PROTECTIVE EQUIPMENT:

- A. General: The Contractor shall provide all project personnel with the necessary safety equipment and protective clothing, taking into consideration the chemical wastes at the Site. The Contractor shall supply Commissioner's on-site personnel (average two people for the project duration) with PPE as specified. At a minimum, the Contractor shall supply all project personnel with the following:
1. Leather steel-toed work boots, and such other clothing and outer garments as required by weather conditions (e.g., insulated coveralls and winter jacket);
 2. Sufficient disposable coveralls;
 3. One pair splash goggles;
 4. Chemical-resistant outer and inner gloves;
 5. Rubber overshoes (to be washed daily);
 6. Hard hat;
 7. One full-face mask with appropriate canisters. Commissioner and the City of New York personnel shall supply their own full-face mask. The Contractor shall supply the appropriate canisters to all on-site project personnel including Commissioner and City of New York representatives. The Contractor shall supply NIOSH approved canisters; and,

8. For all project personnel involved with Level B protection, a positive-pressure SCBA or in-line air. A 5-minute escape bottle must be included with the in-line air apparatus.

B. Levels of Protection: The following sections describe the requirements of all defined levels of protection.

1. Level A Protection

a. PPE:

1) Supplied-air respirator approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators may be:

- a) Positive-pressure SCBA; or,
- b) Positive-pressure airline respirator (with escape bottle for Immediately Dangerous to Life and Health [IDLH] or potential for IDLH atmosphere).

2) Fully encapsulating chemical-resistant suit.

3) Coveralls.

4) Cotton long underwear, optional.

5) Gloves (inner), chemical-resistant.

6) Boots, chemical-resistant, steel toe and shank. (Depending on suit construction, worn over or under suit boot.)

7) Hard hat (under suit), optional.

8) Disposable gloves and boot covers (worn over fully encapsulating suit).

9) Cooling unit, optional.

10) Two-way radio communications (inherently safe), optional.

b. Criteria for Selection: Meeting any of these criteria warrants use of Level A protection:

1) The chemical substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on:

- a) Measures (or potential for) high concentration of atmospheric vapors, gases, or particulates, or
- b) Site operations and work functions involve high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials highly toxic to the skin.

2) Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible.

3) Operation must be conducted in confined, poorly ventilated areas until the absence of substances requiring Level A protection is determined.

4) Direct readings on field Flame Ionization Detectors (FID) or Photoionization Detectors (PID) and similar instruments indicate high levels of unidentified vapors and gases in the air.

c. Guidance on Selection:

1) Fully encapsulated suits are primarily designed to provide a gas- or vapor-tight barrier between the wearer and atmospheric contaminants. Therefore, Level A is generally worn when high concentrations of airborne substances could severely affect the skin. Since Level A requires the use of SCBA, the eyes and respiratory system are also more protected.

2) Until air surveillance data become available to assist in the selection of the appropriate level of protection, the use of Level A may have to be based on indirect evidence of the potential for atmospheric contamination or other means of skin contact with severe skin affecting substances.

3) Conditions that may require Level A protection include:

a) Confined Spaces: Enclosed, confined, or poorly ventilated areas are conducive to the buildup of toxic vapors, gases or particulates. (Explosive or oxygen-deficient atmospheres are also probable in confined spaces). Confined-space entry does not automatically warrant wearing Level A protection, but should serve as a cue to carefully consider and to justify a lower level of protection.

b) Suspected/known highly toxic substances: Various substances that are highly toxic, especially skin absorption, for example, fuming corrosives, cyanide compounds, concentrated pesticides, Department of Transportation Poison "A" materials, suspected carcinogens, and infectious substances may be known or suspected to be involved. Field instruments may not be available to detect or quantify air concentrations of these materials. Until these substances are identified and concentrations measured, maximum protection may be necessary.

c) Visible Emissions: Visible air emission from leaking containers or railroad/vehicular tank cars, as well as smoke from chemical fires and others, indicate high potential for concentrations of substances that could be extreme respiratory or skin hazards.

d) Job Functions: Initial Site entries are generally walk-throughs, in which instruments and visual observations are used to make a preliminary evaluation of the hazards.

4) In initial Site entries, Level A should be worn when:

a) There is a probability for exposure to high concentrations of vapors, gases, or particulates; and,

b) Substances are known or suspected of being extremely toxic directly to the skin or by being absorbed.

5) Subsequent entries are to conduct the many activities needed to reduce the environmental impact of the incident. Levels of protection for later operations are based not only on data obtained from the initial and subsequent monitoring, but also on the probability of contamination and ease of decontamination.

6) Examples of situations where Level A has been worn are:

- a) Excavating of soil to sample buried drums suspected of containing high concentrations of dioxin;
- b) Entering a cloud of chlorine to repair a valve broken in a railroad accident;
- c) handling and moving drums known to contain petroleum; and,
- d) Responding to accidents involving cyanide, arsenic, and undiluted pesticides.

7) The fully encapsulating suit provides the highest degree of protection to skin, eyes, and respiratory system if the suit material resists chemicals during the time the suit is worn. While Level A provides maximum protection, all suit material may be rapidly permeated and degraded by certain chemicals from extremely high air concentrations, splashes, or immersion of boots or gloves in concentrated liquids or sludges. These limitations should be recognized when specifying the type of fully encapsulating suit. Whenever possible, the suit material should be matched with the substance it is used to protect against.

2. Level B Protection

a. PPE:

- 1) Positive-pressure SCBA (NIOSH approved);
- 2) Positive-pressure air line respirator (with escape bottle for IDLH or potential for IDLH atmosphere) NIOSH approved;
- 3) Chemical-resistant clothing (overalls and long-sleeved jacket; coveralls or hooded, one- or two-piece chemical-splash suit; disposable chemical resistant, one-piece suits);
- 4) Cotton long underwear; optional;
- 5) Coveralls;
- 6) Gloves (outer), chemical-resistant;
- 7) Gloves (inner), Chemical-resistant;
- 8) Boots (inner), leather work shoe with steel toe and shank;
- 9) Boots (outer), chemical resistant, (disposable);
- 10) Hard hat (face shield, optional);
- 11) 2-way radio communication, optional; and,
- 12) Taping between suit and gloves, and suit and boots.

b. Criteria for Selection: Any one of the following conditions warrants use of Level B Protection:

1) The type and atmospheric concentration of toxic substances have been identified and require a high level of respiratory protection, but less skin protection than Level A. These atmospheres would:

- a) Have IDLH concentrations;
- b) Exceed limits of protection afforded by an air-purifying mask;
- c) Contain substances for which air-purifying canisters do not exist or have low removal efficiency; or,
- d) Contain substances requiring air-supplied equipment, but substances and/or concentrations do not represent a serious skin hazard.

2) The atmosphere contains less than 19.5% oxygen.

3) Site operations make it highly unlikely that the work being done shall generate high concentrations of vapors, gases or particulates, or splashes of material that shall affect the skin of personnel wearing Level B protection.

4) Working in confined spaces.

5) Total atmospheric concentrations, sustained in the breathing zone, of unidentified vapors or gases range from 5 ppm above background to 500 ppm above background as measured by direct reading instruments such as the FID or PID or similar instruments, but vapors and gases are not suspected of containing high levels of chemicals toxic to skin.

c. Guidance on Selection:

1) Level B equipment provides a reasonable degree of protection against splashes and to lower air contaminant concentrations, but a somewhat lower level of protection to the skin than Level A. The chemical resistance clothing required in Level B is available in a wide variety of styles, materials, construction detail, permeability, etc. Taping joints between the gloves, boots, and suit, and between hood and respirator reduces the possibility for splash and vapor or gas penetration. These factors all affect the degree of protection afforded. Therefore, the SO should select the most effective chemical-resistant clothing based on the known or anticipated hazards and/or job function. (It is anticipated that Level B protection shall not be required under this contract.)

2) Level B does provide a high level of protection to the respiratory tract. Generally, if SCBA is required, Level B clothing rather than a fully encapsulating suit (Level A) is selected based on needing less protection against known or anticipated substances affecting the skin. Level B skin protection is selected by:

- 3) Comparing the concentrations of known or identified substances in air with skin toxicity data;
- 4) Determining the presence of substances that are destructive to or readily absorbed through the skin by liquid splashes, unexpected high levels of gases, vapor or particulates, or other means of direct contact; and,
- 5) Assessing the effect of the substance (at its measured air concentrations or splash potential) on the small area of the head and neck left unprotected by chemical-resistant clothing.
- 6) For initial Site entry at an open site, Level B protection should protect site personnel, providing the conditions described in selecting Level A are known or judged to be absent.

3. Level C Protection

a. PPE:

- 1) Full-face, air-purifying, cartridge- or canister-equipped respirator (NIOSH approved) with cartridges appropriate for the respiratory hazards;
- 2) Chemical-resistant clothing (coveralls, hooded, one-piece or two-piece chemical splash suit; chemical-resistant hood and apron; disposable chemical-resistant coveralls);
- 3) Coveralls;
- 4) Cotton long underwear, optional;
- 5) Gloves (outer), chemical-resistant;
- 6) Gloves (inner), chemical-resistant;
- 7) Boots (inner), leather work shoes with steel toe and shank;
- 8) Boots (outer), chemical resistant (disposable), optional
- 9) Hard hat (face shield), optional;
- 10) Escape SCBA of at least 5-minute duration;
- 11) 2-way radio communications (inherently safe), optional; and,
- 12) Taping between suit and boots, and suit and gloves.

b. Criteria for Selection: Meeting all of these criteria permits use of Level C protection:

- 1) Measured air concentrations of identified substances shall be reduced by the respirator to, at or below, the substance's Threshold Limit Value (TLV) or

appropriate occupational exposure limit and the concentration is within the service limit of the canister.

2) Atmospheric contaminant concentrations do not exceed IDLH levels.

3) Atmospheric contaminants, liquid splashes, or other direct contact shall not adversely affect the small area of the skin left unprotected by chemical-resistant clothing.

4) Job functions do not require SCBA.

5) Total readings register between background and 5 ppm above background as measured by instruments such as the FID and PID.

6) Oxygen concentrations are not less than 19.5% by volume.

7) Air shall be monitored continuously.

c. Guidance on Selection:

1) Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing air-purifying devices. The air-purifying device must be a full-face mask (NIOSH approved) equipped with a cartridge suspended from the chin or on a harness. Cartridges must be able to remove the substances encountered.

2) A full-face, air-purifying mask can be used only if:

- a) Oxygen content of the atmosphere is at least 19.5% by volume;
- b) Substance(s) is identified and its concentration(s) measured;
- c) Substance(s) has adequate warning properties;
- d) Individual passes a qualitative fit-test for the mask; and,
- e) Appropriate cartridge is used, and its service limits concentration is not exceeded.

3) An air monitoring program is part of all response operations when atmospheric contamination is known or suspected. It is particularly important that the air be monitored throughout when personnel are wearing air-purifying respirators (Level C). Continual surveillance using direct-reading instruments and air sampling is needed to detect any changes in air quality necessitating a higher

level of respiratory protection. Total unidentified vapor/gas concentrations exceeding 5 ppm above background require Level B.

4. Level D Protection

a. PPE:

- 1) Coveralls;
- 2) Gloves (outer), chemical-resistant, optional;
- 3) Gloves (inner), chemical-resistant, optional;
- 4) Boots (inner), leather work shoes with steel toe and shank;
- 5) Boots (outer), chemical-resistant (disposable), optional;
- 6) Hard hat;
- 7) Face shield, optional; and,
- 8) Safety glasses with side shields or chemical splash goggles.

b. Criteria for Selection:

- 1) No atmospheric contamination is present.
- 2) Direct reading instruments do not indicate any readings above background.
- 3) Job functions have been determined not to require respirator protection.

c. Guidance on Selection Criteria:

- 1) Level D protection is distinguished from Level C protection in the requirements for respiratory protection. Level D is used for nonintrusive activities with continuous air monitoring. It can be worn only in areas where there is no possibility of contact with contamination.

C. Self-Contained Breathing Apparatus

1. The Contractor shall provide positive-pressure SCBAs for possible upgrades in respiratory protection. The Contractor shall supply all the SCBAs required for the duration of work activities. The units must be a NIOSH-approved pressure-demand type with a 30-minute service life. The Contractor shall inspect and maintain respirators in accordance with OSHA regulations (29 CFR 1910.13-4) and as recommended by the manufacturer.

D. Disposable Coveralls

1. The Contractor shall provide, as necessary, protective coveralls for all project personnel each day with extra sets provided for authorized visitors. The coveralls shall be of the disposable type. To protect project personnel from exposure to liquids, splash-resistant suits (Saranex suits, from appropriate manufacturers) shall be provided. Ripped suits shall

be immediately replaced after all necessary decontamination has been completed to the satisfaction of the SO.

E. Hard Hat

1. The Contractor shall provide and maintain one hard hat per person on-site (authorized visitors included). The hard hats shall comply with OSHA Health and Safety Standards (29 CFR 1910.135).

F. Face Shields

1. The Contractor shall provide and maintain one face shield per person on-site. The face shields shall be of the full face type meeting OSHA Health and Safety Standards (29 CFR 1910.133) and shall have brackets for mounting on hard hats. Hard hats and face shields shall be from the same manufacturer to ensure proper fit.

G. Work Clothing

1. The Contractor shall provide a minimum of two sets of work clothing per personnel to allow for changing if contaminated. The work clothing shall include a minimum of underwear, socks, work shirts, work pants, and other clothing as weather conditions dictate. All work clothes shall be put on clean, before entering the Site and shall not be kept in same lockers as the workers street clothes. All project personnel shall shower and change to street clothing prior to leaving the Site. All contaminated work clothing shall be laundered on-site with wash water drained to the decontamination water holding tank.

H. Escape-Type Respirator

1. The Contractor shall provide and maintain one 5-minute self-contained breathing escape-type respirator per person working on-site. The small self-contained device shall be capable of providing air to the worker while protecting an escaping worker from toxic gases. The Contractor shall inspect and ensure all devices are in working order before issuing to personnel. Employees must be trained to use equipment prior to being allowed to work on-site and carry the escape-type respirator with them. An escape-type respirator must be provided if positive-pressure SCBA are not part of the ensemble worn by each person on the Site.

I. Full Face Organic Vapor Respirator

1. The Contractor shall provide and maintain a dedicated air-purifying organic vapor respirator per person working in hazardous work and neutral work zones. The respirator shall be of the full-face canister type with cartridges appropriate for the respiratory hazards. Respirators and cartridges shall be NIOSH approved. The Contractor shall inspect and maintain respirators and canisters in accordance with OSHA regulations (29 CFR 1910.134) and in accordance with manufacturer's instructions. The Contractor shall ensure that proper fit testing training and medical surveillance of respirator users is in accordance with OSHA regulations (29 CFR 1910.134).

J. Gloves (outer)

1. The Contractor shall supply a minimum of one pair of gloves per workman in areas where skin contact with hazardous materials is possible. Work gloves shall consist of nitrile (NCR) or Neoprene material. Other gloves may be selected if required based on the potential chemical present. Cotton liners shall be provided by the Contractor during cold weather.

K. Gloves (inner)

1. The Contractor shall supply Latex or equivalent surgical gloves to be worn inside the outer gloves.

L. Boots (inner)

1. The Contractor shall supply one pair of safety shoes or boots per workman and shall be of the safety-toe type meeting the requirements of 29 CFR 1910.136.

M. Boots (outer)

1. The Contractor shall provide and maintain one pair of overshoes for the on-site person entering a hazardous work area. The overshoes shall be constructed of rubber and shall be 12 inches high minimum.

1.14 PERSONAL HYGIENE AND DECONTAMINATION:

A. On-Site Hygiene Facility

1. The Contractor shall provide a hygiene facility on-site. The hygiene facility shall include the following:

- a. Adequate lighting and heat;
- b. Shower facilities for project personnel;
- c. Laundry facilities for washing work clothes and towels;
- d. Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;
- e. Clean and "dirty" locker facilities; and,
- f. Storage area for work clothing, etc.

B. Portable "Boot Wash" Decontamination Equipment

1. The Contractor shall provide a portable decontamination station, commonly referred to as a "Boot Wash" facility for each hazardous work zone requiring decontamination for project personnel. These facilities shall be constructed to contain spent wash water, contain a reservoir of clean wash water, a power supply to operate a pump for the wash water, a separate entrance and exit to the decontamination platform, with the equipment being mobile allowing easy transport from one hazardous work zone to the next. All such wash water shall be disposed of at the dewatering facility. An appropriate detergent such as tri-sodium phosphate shall be used.

C. Personnel Decontamination

1. The Contractor shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the HASP.

D. Disposal of Spent Clothing and Material

1. Contaminated clothing, used respirator cartridges and other disposable items shall be put into drums/containers for transport and proper disposal in accordance with RCRA requirements.
2. Containers/55-gallon capacity drums shall conform to the requirements of 49 CFR Part 178 for Transportation of Hazardous Materials. The containers/drums containing excavated and other hazardous materials shall be transported by the Contractor to the staging area.
3. The Contractor is responsible for the proper container packaging, labeling, transporting, and disposal.

1.15 EQUIPMENT DECONTAMINATION:

A. General

1. All equipment and material used in the exclusion zone or contamination reduction zone of the project shall be thoroughly washed down in accordance with established federal and state procedures before it is removed from the project. All other contaminated debris, equipment, clothing, decontamination liquids, etc. that cannot be decontaminated shall be disposed at the Contractor's expense by a method permitted by appropriate regulatory agencies. The cost for this element of work shall be incorporated in the lump sum bid for mobilization/demobilization, or as otherwise directed on this project. All vehicles and equipment used in the exclusion zone shall be decontaminated to the satisfaction of the SO in the decontamination area on-site prior to leaving the project. The Contractor shall certify, in writing, that each piece of equipment has been decontaminated prior to removal from the Site.

2. Decontamination shall take place within the designated equipment and materials decontamination area. The decontamination shall consist of degreasing (if required), followed by high-pressure, hot-water cleaning, supplemented by detergents as appropriate. Wash units shall be portable, high pressure with a self-contained water storage tank and pressurized system (if required). Each unit shall be capable of heating wash waters to 180 degrees Fahrenheit and providing a nozzle pressure of 150 psi.

3. Personnel engaged in vehicle decontamination shall wear the appropriate level of Protective clothing and equipment (to be addressed in the Contractor's HASP). If the Contractor cannot or does not satisfactorily decontaminate his tools or equipment at the completion of the project, the Contractor shall dispose of any equipment which cannot be decontaminated satisfactorily and shall bear the cost of such tools and equipment and its disposal without any liability to the City of New York or the Commissioner or his representatives. At the completion of the project the Contractor shall completely decontaminate and clean the decontamination area.

B. Decontamination Station

1. The Contractor shall construct a decontamination station as described in Section 02 00 20. The decontamination station shall be located in the Contamination Reduction Zone and shall be used to clean all vehicles leaving the Exclusion Zone prior to entering the Support Zone or leaving the Site.

C. Action Levels

1. The Contractor is responsible for developing level of protection-site action levels for organic vapors for petroleum UST/piping work and for lead in dust during demolition activities. The contractor shall also be responsible for developing level of protection site

action levels for RCRA Listed metals during all Sealed Incinerator Rooms demolition activities including waste staging and handling.

2. The SO, Contractor, and their personnel shall be responsible for implementing, maintaining, and enforcing the respirator program.

3. In addition to these on-site action levels, the following action levels shall be established for work area and perimeter monitoring of particulates. If the following levels are attained at half the distance between the work zone and the property line, then work shall cease until engineering controls bring levels down to acceptable limits. These levels are general and shall be used as minimum action levels. The Contractor shall develop Site-specific perimeter monitoring action levels based on contaminants found in the work areas.

Parameter Action Level

Total Particulates 2.5 times background and greater than 150 µg/m³

1.16 AIR MONITORING PROGRAM:

A. General

1. The Contractor shall develop, as part of the HASP, an air monitoring program (AMP). The purpose of the AMP is to determine that the proper level of personnel protective equipment is used, to document that the level of worker protection is adequate, and to assess the migration of contaminants to off-site receptors as a result of Site work. The AMP must be developed and signed by a Certified Industrial Hygienist.

2. The Contractor shall perform all required air monitoring services required for the project or secure and provide the services of an independent air monitoring consultant to do so.

3. The Contractor shall supply all personnel, equipment, facilities, and supplies to develop and implement the air monitoring program described in this section. Equipment shall include at a minimum: an organic vapor analyzer, and real-time aerosol monitors, depending on work activities and environmental conditions.

4. The Contractor's AMP shall include both real-time and documentation air monitoring (personal and area sampling as needed). The purpose of real-time monitoring shall be to determine if an upgrade (or downgrade) of PPE is required while performing on-site work and to implement engineering controls, protocols, or emergency procedures if Contractor-established action levels are encountered.

5. The Contractor shall also use documentation monitoring to ensure that adequate PPE is being used and to determine if engineering controls are mitigating the migration contamination to off-site receptors. Documentation monitoring shall include the collection and analysis of samples for asbestos, total nuisance dust and metals.

6. During the progress of active remedial work, the Contractor shall monitor the quality of the air in and around each active hazardous operation with real-time instrumentation prior to personnel entering these areas. Sampling at the hazardous work Site shall be conducted on a continuous basis. Any departures from general background shall be reported to the SO prior to entering the area. The SO shall determine when and if operations should be shut down.

7. Air monitoring equipment shall be operated by personnel trained in the use of the specific equipment provided and shall be under the control of the SO. A log of the location, time, type, and value of each reading and/or sampling shall be maintained. Copies of log sheets shall be provided on a daily basis to Commissioner's on site representative.

B. Real-Time Monitoring (Work Zone)

1. Real-time air monitoring shall be conducted using the following equipment:

- a. Organic vapor photoionizers or photoionization detectors (PIDs) shall be utilized. The Contractor shall provide one PID for each and every hazardous work zone operation taking place where petroleum based or impacted materials are being removed/handled (i.e., drum and tank removal operations). Generated dust (particulates) shall be measured using a real-time aerosol monitor for excavation work areas. The instrument shall be calibrated daily according to the procedure in the user's manual. The meter shall be capable of measuring dust concentrations down to 0.01 mg/m³.
- b. Real-time monitoring shall be conducted at any excavation of contaminated soil or sediments and during all demolition work.
- c. Real-time particulate monitoring shall also be conducted at perimeter locations including an upwind (background) and a downwind location. A background reading shall be established daily at the beginning of the work shift. If the wind direction changes during the course of the day, a new background reading shall be made. Downwind readings at the perimeter shall be made when the Contractor action levels have been exceeded at the excavation face or at a minimum of twice a day.
- d. If the Contractor-established action levels are exceeded at the perimeter location for fugitive dust, work must be suspended and engineering controls must be implemented to bring concentrations back down to acceptable levels.

C. Documentation Monitoring (Perimeter)

1. Documentation monitoring shall be conducted each active work day by the Contractor or his air monitoring consultant at the perimeter at a minimum of three locations (one upwind and two downwind) for dust (using PM-10 and TSP methods) and RCRA List metals (using TSP methods). The documentation monitoring for dust and RCRA metals shall be conducted during all Sealed Incinerator Rooms demolition activities.
2. Total nuisance dust shall be collected during all demolition activities using a particulate dust analyzer.
3. Documentation samples shall be collected at established perimeter locations. The three locations shall be chosen according to Site activities and expected wind direction. The Contractor or Contractors air monitoring consultant shall perform a minimum of three weeks of PM-10, TSP and TSP RCRA metals monitoring during initial Sealed Incinerator Rooms demolition work. Additional PM-10, TSP and TSP RCRA metals monitoring shall be performed if real time dust monitoring action levels are exceeded.
4. The perimeter locations shall be established and marked with high visibility paint or flagging at approximately equidistant points around the Site. Samples shall be collected at a height of 6 feet above ground surface.
5. Work area perimeter monitoring shall be performed by the Contractor for nuisance dust and RCRA metals using NIOSH methods. Three samples shall be collected twice a week at regularly scheduled intervals during Sealed Incinerator Rooms demolition activities. Samples shall be collected from within the work areas.
6. The Contractor or Contractor's air monitoring consultant shall perform a minimum of three weeks of PM-10, TSP and TSP lead sampling during the initiation of the building demolition phase. Additional PM-10, TSP and TSP lead monitoring shall be performed if real time dust monitoring action levels are exceeded.
7. In addition to perimeter monitoring, documentation samples shall be collected on-site. On-site samples shall be collected to document worker exposure to respirable lead/paint and for asbestos. Asbestos air monitoring requirements are provided in Section 02 82 13.

D. Community Air Monitoring (Perimeter)

1. Real-time air monitoring, for particulate levels at the perimeter of the work area is necessary:

- a. Contractor shall develop a Community Air Monitoring Plan (CAMP) as a component of the Community Protection Plan (CPP).
- b. Contractor shall continuously monitor for particulates upwind, downwind and within the work area at temporary particulate monitoring stations. If the downwind particulate level is $150 \mu\text{g}/\text{m}^3$ greater than the upwind particulate level, then dust suppression techniques must be employed. All readings must be recorded and be available for Commissioner's review.
- c. The Contractor shall install a meteorological station on-site that shall be capable of recording, at a minimum, wind velocity and direction.

1.17 EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS:

A. Communications

1. Emergency numbers, such as police, fire, ambulance, hospital, NYSDEC, USEPA, NYSDOH, and utilities, applicable to this Site shall be prominently posted near Site telephones.
2. The Contractor shall establish a signaling system for emergency purposes.

B. Emergency Shower and Emergency Eye Wash

1. The Contractor shall supply and maintain one portable eyewash/body wash facility per active hazardous work zone. The facility shall have a minimum water capacity of 10 gallons and shall conform to OSHA regulations 29 CFR 1910.151.

C. Fire Extinguishers

1. The Contractor shall supply and maintain at least one fire extinguisher in the Contractor's office and one at each hazardous work zone. The fire extinguisher shall be a 20-pound Class ABC dry fire extinguisher with UL-approved per OSHA Safety and Health Training Standards 29 CFR 1910.157.

D. First Aid Kit

1. The Contractor shall supply and locate in his project office and at each and every hazardous work zone one 24-unit (minimum size) "industrial" or Contractor" first aid kit, required by OSHA requirements 29 CFR 1910.151.

E. Emergency Inventory

1. In addition to those specified elsewhere, the SO shall maintain the following inventory of equipment and protective clothing for use at the Site in the event of emergencies:

- a. Washable coveralls;
- b. Gloves (outer);
- c. Gloves (inner);
- d. SCBA;
- e. Escape SCBA (authorized visitor use);
- f. Face shields;
- g. Safety glasses;
- h. Respirators and appropriate cartridges;
- i. Disposable coveralls;
- j. Chemical-resistant boots and latex boot covers;
- k. Hard hats;
- l. Bottled breathing air; and,
- m. Rain suits:

1.18 EMERGENCY RESPONSES/CONTINGENCY PLAN AND PROCEDURES:

A. Daily Work

1. During the progress of work, the Contractor shall monitor the quality of the air in and around each active hazardous operation prior to personnel entering these areas. Sampling shall be conducted on a continuous basis. Based on the air monitoring data, the proper level of protection shall be chosen by the SO.

B. Emergency Vehicle Access

1. In the event that emergency services vehicles (police, fire, ambulance) need access to a location which is blocked by the working crew operations, those operations (equipment, materials, etc.) shall be immediately moved to allow those vehicles access. Emergency crews shall be briefed as to Site conditions and hazards by the SO. All vehicles and personnel shall be decontaminated prior to leaving the Site.

2. The Contractor shall schedule a site briefing with the local Fire Department at the completion of mobilization to familiarize emergency response personnel with his operations and Site layout.

C. Personal Injury Response Plan

1. In cases of personal injuries, the injured person or the crew personnel in charge shall notify the SO. The SO shall assess the seriousness of the injury, give first aid treatment if advisable, consult by telephone with a physician if necessary, and arrange for hospitalization if required. The SO shall arrange for an ambulance if required.
2. If soiled clothing cannot be removed, the injured person shall be wrapped in blankets for transportation to the hospital.
3. Personnel, including unauthorized personnel, having skin contact with chemically contaminated liquids or soils shall be flushed with water after any wet or soiled clothing has been removed.
4. These personnel should be observed by the SO to ascertain whether there are any symptoms resulting from the exposure. If there is any visible manifestation of exposure such as skin irritation, the project personnel shall refer to a consulting physician to determine whether the symptoms were the result of a delayed or acute exposure, a secondary response to exposure such as skin infection, or occupational dermatitis. All episodes of obvious chemical contamination shall be reviewed by the SO in order to determine whether changes are needed in work procedures.

D. Route to the Hospital

1. The Contractor shall post in conspicuous places in the Support Zone a map with written directions to the nearest hospital or emergency medical treatment facility.

E. Fire Service

1. The Contractor shall make arrangements to take immediate firefighting and fire protection measures with the New York City Fire Department. If there is a fire, the crewmen or their person in charge shall immediately call the SO. The SO shall immediately call the fire personnel.
2. The air downwind from any fire or explosion shall be monitored immediately in order to protect workers and the nearby community. If personal injuries result from any fire or explosion, the procedures outlined in the Personal Injury Response Plan are to be followed.

F. Master Telephone List

1. The attached master telephone list shall be completed and prominently posted at the field office. The list shall have telephone numbers of all project personnel, emergency services

including hospital, fire, police, and utilities. In addition, two copies with telephone numbers are to be given to the City of New York for emergency reference purposes.

Emergency Service Telephone Number

Fire Department (To be completed by Contractor)

Police Department (To be completed by Contractor)

Ambulance (To be completed by Contractor)

Hospital/Emergency Care Facility (To be completed by Contractor)

Poison Control Center (To be completed by Contractor)

Chemical Emergency Advice (To be completed by Contractor)

NYCDEP Office (To be completed by Contractor)

NYSDEC Region 2 office (To be completed by Contractor)

New York State Department of Health (To be completed by Contractor)

FDNY Operations Control Emergency Response Center (212) 837-3900

DSNY Environmental Police (212) 837-8451

1.19 HEAT STRESS MONITORING:

A. Site personnel who wear protective clothing allow body heat to be accumulated with an elevation of the body temperature. Heat cramps, heat exhaustion and heat stroke can be experiences, which if not remedied, can threaten life or health. Therefore, an American Red Cross Standard First Aid book or equivalent shall be maintained on-site at all times so that the SO and site personnel shall be able to recognize symptoms of heat emergencies and be capable of controlling the problem.

B. When protective clothing is worn, especially Levels A and B, the suggested guidelines for ambient temperature and maximum wearing time per excursion are:

Ambient Temperature (°F)	Maximum Wearing Time per Excursion
50 to 60	180
60 to 70	120
70 to 80	90
80 to 85	60
85 to 90	30
Above 90	15

C. One method of measuring the effectiveness of employee's rest-recovery regimen is by monitoring the heart rate. The "Brouha guideline" is one such method:

1. During a 3-minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute, and the last 30 seconds of the third minutes.

2. Double the count.

D. If the recovery pulse rate during the last 30 seconds of the first minute is at 110 beats/minute or less and the deceleration between the first, second, and third minutes is at least 10 beats/minute, the work-recovery regime is acceptable. If the employee's rate is above that specified, a longer rest period is required, accompanied by an increased intake of fluids.

E. In the case of heat cramps or heat exhaustion, "Gatorade" or its equivalent is suggested as part of the treatment regime. The reason for this type of liquid refreshment is that such beverages shall return much-needed electrolytes to the system. Without these electrolytes, body systems cannot function properly, thereby increasing the represented health hazard.

F. This liquid refreshment shall be stored in a cooler at the edge of the decontamination zone in plastic squeeze bottles. The plastic bottles shall be marked with individual's names. Disposable cups with lids and straws may be used in place of the squeeze bottles. Prior to drinking within the decontamination zone, the project personnel shall follow the following decontamination procedures:

1. Personnel shall wash and rinse their outer gloves and remove them.
2. Personnel shall remove their hard hats and respirators and place on the table.
3. Personnel shall remove their inner gloves and place them on the table.
4. Personnel shall wash and rinse their face and hands.
5. Personnel shall carefully remove their personal bottle or cup from the cooler to ensure that their outer clothes do not touch any bottles, cups, etc.
6. The used bottle or cups shall not be returned to the cooler, but shall be placed in a receptacle or container to be cleaned or disposed of.
7. Personnel shall replace their respirators, hard hats, gloves and tape gloves prior to re-entering the hazardous zone.

G. When personnel are working in situations where the ambient temperatures and humidity are high--and especially in situations where Protection Levels A, B, and C are required--the SO must:

1. Assure that all employees drink plenty of fluids ("Gatorade" or its equivalent);
2. Assure that frequent breaks are scheduled so overheating does not occur; and,
3. Revise work schedule, when necessary, to take advantage of the cooler parts of the day (i.e., 5:00 a.m. to 1:00 p.m., and 6:00 p.m. to nightfall).

H. Cold Stress

1. Whole-body protection shall be provided to all site personnel that have prolonged exposure to cold air. The right kind of protective clothing shall be provided to site personnel to prevent cold stress. The following dry clothing shall be provided by the Contractor as deemed necessary by the SO:

- a. Appropriate underclothing (wool or other);
- b. Outer coats that repel wind and moisture;
- c. face, head, and ear coverings;
- d. Extra pair of socks;
- e. Insulated safety boots; and,
- f. Glove liners (wool) or wind- and water-repellant gloves.

2. The SO shall use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining clothing insulation requirements.

3. Site personnel working continuously in the cold are required to warm themselves on a regular basis in the in-site hygiene facility. Warm, sweet drinks shall be provided to site personnel to prevent dehydration. The SO shall follow the work practices and recommendations for cold stress threshold limit values as stated by the 1991-1992 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists or equivalent cold stress prevention methods.

1.20 CONFINED SPACE ENTRY:

A. General

A confined space is defined as an area which has adequate size and configuration for employee entry, limited means of access or egress, and is not designed for continuous employee occupancy. Entry into such spaces requires a written permit in accordance with OSHA 29 CFR 1910.146. A permit required confined space is defined as a space that presents, or has potential to present hazards related to toxic, flammable or asphyxiating atmospheric conditions, engulfment, or any other recognized serious hazard. The following regulations must be adhered to, once it has been established that the above conditions exist:

1. Employees must be informed of confined spaces through the use of signs or other equally effective means, and unauthorized entry must be prevented.

2. The Contractor shall provide specified equipment to all employees involved in confined space entry.
3. An attendant must be stationed outside the permitted space during entry.
4. Procedures for summoning rescuers and prevention of unauthorized personnel from attempting rescues must be established for different working locations.
5. Prepare and sign written permits and order corrective measures if time of entry and shall extend only for the duration of the task defined on the entry permit.

B. Entry Requirements

1. Entry permits for confined spaces are mandatory. An entry supervisor must authorize entry, prepare and sign written permits and order corrective measures, if needed, and/or cancel permits when work is completed. Permits must be available to permit space entrants at time of entry and shall extend only for the duration of the task. They shall be retained for one year to facilitate the confined space program.
2. Initial and refresher training shall be held to provide necessary understanding, skills and knowledge for performing the job safely to affected employees. Training shall be conducted whenever an employee's duties change, when identifying hazards in the confined space, or when evaluation on the confined space entry program identifies hazards in the confined space, or when an evaluation of the confined space entry program identifies inadequacies in the employee's knowledge. Records shall be maintained as to certify training of affected employees.
3. Entrants must know potential hazards; recognize signs or symptoms of exposure and understand the consequences of exposure to hazards. Entrants must also know how to use needed equipment; communication with attendants as required; alert attendants to the warning signs or the existence of possible hazardous conditions; and, exit as quickly as possible whenever ordered or alerted, by alarm, warning signs, or prohibited conditions, to do so.
4. Entrants must know potential hazards of confined spaces; be aware of behavioral effects of exposure; maintain continuous identification of authorized attendants; must remain outside the space until relieved, and communicate with entrants as required to monitor activities inside and outside permitted space; order exit if required; summon rescuers if necessary; prevent unauthorized entry and perform non-entry services, if required. They may not perform other duties that interfere with their primary duty to monitor and protect safety of authorized entrants.

5. The Contractor's entry supervisor shall be responsible for issuing confined space entry permits. Must know the hazards of confined spaces and verify that all tests have been conducted; procedures and equipment are in place and in good working condition before endorsing permits; terminate entry if required and verify rescue services are available and able to contact. They must also determine when shifts and entry supervisors change, and that acceptable conditions, as specified in the permit, continue.

C. Procedures for Atmospheric Testing

Atmospheric testing is required for two distinct purposes; evaluation of the hazards of the permit space and verification that acceptable entry conditions for entry into that space exist.

1. Evaluation Testing: The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity to identify and evaluate any hazardous atmosphere that may exist or arise, so that appropriate permit entry procedures can be developed and acceptable entry conditions stipulated for that space. Evaluation and interpretation of these data, and development of the entry procedure, should be done by, or reviewed by a technically qualified professional (e.g., OSHA consultant service, or certified industrial hygienist, registered safety engineer, certified safety professional, etc.) based on evaluation of all serious hazards.
2. Verification Testing: The atmosphere should be tested for residues of all contaminants identified by evaluation testing using permit specified equipment to determine that residual concentrations at the time of testing and entry within the range of acceptable entry conditions. Results of testing (i.e., actual concentration, etc.) should be recorded on the permit in the space provided adjacent to the stipulated acceptable entry condition.
3. Duration of Testing: Measurement of values for each atmospheric parameter should be made for at least the minimum response time of the test instrument specified by the manufacturer.
4. Testing Stratified Atmosphere: When monitoring for entries involving a descent into atmosphere that may be stratified, the atmospheric envelope should be tested to a distance of approximately 4 feet (1.22m) in the direction travel and to each side. If sampling probe is sent, the entrant's rate of progress should be slowed to accommodate the sampling speed and detector response.

D. Control of Atmospheric and Engulfment Hazards

1. Pumps and Lines: All pumps and lines which may reasonably cause contaminants to flow into the space shall be disconnected, blinded and locked out, or effectively isolated by other means to prevent development of dangerous air contamination or engulfment. Not all laterals to sewers or storm drains require blocking. However, where experience or knowledge of industrial use indicates there is a reasonable potential for contamination of air or engulfment into occupied space, then all affected laterals shall be blocked. If blocking and/or isolation requires entry into the space the provisions for entry into a permit required confined space must be implemented.
2. Surge Flow and Flooding: Sewer crews should develop and maintain liaison, to the extent possible, with the local weather bureau and fire and emergency services in their area so that sewer work may be delayed or interrupted and entrants withdrawn whenever sewer lines might suddenly flood by rain or fire suppression activities, or whenever flammable or other hazardous materials are released into space during emergencies by industrial transportation accidents.
3. Surveillance: The surrounding areas shall be surveyed to avoid hazards such as drifting vapors from the tanks, piping, or sewers.
4. Testing: The atmosphere within the space shall be tested to determine whether dangerous air contamination and/or oxygen deficiency exists. An alarm only type gas monitor may be used. Testing shall be performed by the lead Worker who has successfully completed the Gas Detector training for the monitor he shall use. The minimum parameters to be monitored are oxygen deficiency, LEL, and hydrogen sulfide concentration. A written record of the pre-entry test results shall be made and kept at the work Site for the duration of the job. The supervisor shall certify in writing, based upon the results of the pre-entry testing, that all hazards have been eliminated. Affective employees shall be able to review the testing results. The most hazardous conditions shall govern when work is being performed in two adjoining areas.

E. Permit Required Confined Space Entry

1. All spaces shall be considered permit required confined spaces until the pre-entry procedures demonstrate otherwise. Any employee required or permitted to precheck or enter a permit-required confined space shall have successfully completed, as a minimum, the training as required by the following sections of this specification. A written copy of the operating and rescue procedures as required by these procedures. A written copy of the operating and rescue procedures shall be at the work Site for the duration of the job.

2. The Confined Space Entry Permit must be completed before approval can be given to enter a permit-required confined space. This permit verifies completion of items listed below. This permit shall be kept at the job Site for the duration of the job. If circumstances cause an interruption in the work or change the alarm condition for which entry was approved, a new Confined Space Entry Permit must be completed.
3. Surveillance: The surrounding area shall be surveyed to avoid hazards such as drifting vapors from tanks, piping or sewers.
4. Atmospheric Monitoring: Entrants must be trained in the use of, and be equipped with, atmospheric monitoring equipment which sounds an audible alarm, in addition to its visual readout, whenever one of the following conditions is encountered: Oxygen concentration less than 19.5 percent; flammable limit (LEL); or, hydrogen sulfide or carbon monoxide at or above their PEL (10 ppm or 50 ppm, respectively); or, if broad range sensor device is used, at 100 ppm as characterized by its response to toluene. Normally, the oxygen sensor/broad range sensor instrument is best suited for space entry. However, substance specified devices should be used whenever actual contaminants in space line work to monitor the atmosphere be carried and used by the entrant of any deterioration of atmospheric conditions. Where several entrants are working together in the same immediate location, one instrument, used by the lead entrant, is acceptable.
5. Space Ventilation: Mechanical ventilation systems, where applicable, shall be set at 100% outside air. Where possible, open additional manholes to increase air circulation. Use portable blowers to augment natural circulation if needed. After a suitable ventilating period, repeat the testing. Entry may not begin until testing has demonstrated that the hazardous atmosphere has been eliminated.
6. All personnel must be trained. A self-contained breathing apparatus shall be worn by any person entering the space. At least one worker shall stand by the outside of the space ready to give assistance in case of emergency. The standby worker shall have a self-contained breathing apparatus available for immediate use. There shall be at least one additional worker within sight or call of the standby worker. Continuous powered communications shall be maintained between the worker within the confined space and standby personnel.

1.21 LOGS, REPORTS AND RECORD KEEPING:

A. Security Log

1. A daily log of security incidents and visitors granted access to the Site shall be maintained, as well as a log of all personnel entering and exiting the Site.
2. All approved visitors to the Site shall be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit. Site visitors shall not be permitted to enter a hazardous work zone.
3. Project Site shall be posted, "Warning: Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by fencing and hard walls.

B. Safety Log

1. The Contractor's SO shall maintain a bound safety logbook. The log shall include all health and safety matters on-site and include, but not be limited to, the following information:
 - a. Date and weather conditions on-site;
 - b. A description of the proposed work for the day;
 - c. Times when site personnel arrive and depart;
 - d. Air monitoring data;
 - e. Heat and/or cold stress monitoring;
 - f. Decontamination procedures;
 - g. Type and calibration of air sampling/monitoring equipment used;
 - h. Safety meeting summaries; and,
 - i. Accidents.

C. Emergency or Accident Report

1. Any emergency or accident shall be reported immediately to the SO. The Commissioner shall also be notified. The Contractor shall submit a written report immediately, but no later than 24 hours of its occurrence. The report shall include, but not be limited to, the nature of the problem, time, location, areas affected, manner and methods used to control the emergency, sampling and/or monitoring data, impact, if any, to the surrounding community, and corrective actions the Contractor shall institute to minimize future occurrences. All spills shall be treated as emergencies.

D. Daily Work Report

1. The Contractor shall maintain a daily work report that summarizes the following:
 - a. Work performed,
 - b. Level of protection,

- c. Air monitoring results,
- d. Safety-related problems, and
- e. Corrective actions implemented.

1.22 POSTING REGULATIONS:

A. The Contractor shall post signs at the perimeter of the Exclusion Zone that state "Warning: Hazardous Work Area, Do Not Enter Unless Authorized". In addition, a notice directing visitors to sign in stating that any questions about the Site should be directed to the New York City Department of Sanitation. In addition, all required asbestos postings must be made (see Section 02 82 13).

B. Safety regulations and safety reminders shall be posted at conspicuous locations throughout the project area. The following safety regulations and safety reminders are at a minimum to be posted around the job Site.

C. SAFETY REGULATIONS (To be Posted for Project Personnel)

The main safety emphasis is on preventing personal contact with gases, soils, sludge and water. Towards that end, the following rules have been established.

1. Regulations

- a. Eating on the Site is PROHIBITED except in specifically designated areas.
- b. All project personnel on the Site must wear clean or new gloves daily.
- c. If you get wet to the skin, you must wash the affected area with soap and water immediately. If clothes in touch with the skin are wet, these must be changed.
- d. You must wash your hands and face before eating, drinking or smoking.
- e. Observe regulations on washing and removing boots before entering the dressing room or a clean area and showering before going home.

D. SAFETY REMINDER FOR TOXIC CHEMICALS (Post for Project Personnel)

Chemicals can't cause problems unless you breathe them, eat them, or put them on your skin.

1. Chemicals in Gases, Soils, Ash, Sludge, and Water

- a. Don't let them go into your mouth, nose, or stay on your skin.
- b. Use common personal hygiene.
- c. Do not eat or drink on the Site.
- d. No smoking in the area of work.
- e. Wear protective clothing.

- f. Glove liners must be clean
- g. Wash your hands whenever practical. Wash before eating, drinking, or smoking.
- h. Do not carry chemicals home to your family (i.e., on clothing, mud in the car, dirty hands).
- i. Follow strictly the HASP.

1.23 COMMUNITY PROTECTION:

A. General

1. The Contractor shall develop and implement, as part of the HASP, a Community Protection Plan (CPP). The CPP shall outline those steps which the Contractor shall implement to protect the health and safety of surrounding human population and the environment. The CPP shall include a CAMP incorporating appropriate requirements identified by the NYSDOH for a remediation site, which are included in Appendix 1A of *NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation*. The CAMP shall include a fugitive dust/particulate monitoring program. Guidance for developing a fugitive dust/particulate monitoring program is included in Appendix 1B of NYSDEC DER-10.
2. The Contractor shall provide up to eight complete sets of protection gear (excluding respirators) of a type applicable to the Site conditions for use by emergency units responding to the Site.

B. Spill Response

1. The Contractor shall produce a Spill Response Plan, also coordinated with local officials, in case of an off-site spill of either liquid or solid wastes. The plan shall include transportation routes and times, as well as arrangements for cleanup and decontamination measures. The driver shall be supplied with Material Safety Data Sheets (MSDSs), a 24-hour emergency phone number, and instructions for reporting emergencies to local agencies and the project Site.

PRODUCTS (Not Used)

EXECUTION (Not Used)

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 00 30

EMERGENCY SPILL CONTROL

PART 1 - GENERAL

1.01 SCOPE:

A. This Section specifies requirements applicable to the establishment and implementation of a comprehensive Emergency Spill Control Plan for any and all Contractor-generated spills.

1. A spill is defined, for the purpose of this Section, as being a release to the environment of any quantity of gasoline, diesel fuel, oil, or any other potentially hazardous substance, controlled or uncontrolled, that warrants immediate and appropriate response to that event to immediately contain and control the event for the protection of the environment.

1.02 GENERAL REQUIREMENTS:

A. The Contractor's methods, means, and facilities shall prevent new or further contamination of soil, surface water, groundwater, atmosphere, structures, equipment, or material by spills resulting from the Contractor's operations.

B. The Contractor shall prevent spills from contaminating soil, surface water, groundwater, atmosphere, structures, equipment, and construction materials.

C. Off-site disposal facilities shall be required for liquid spills. The Contractor shall bear the costs of all disposal.

D. The Contractor shall provide all required equipment and personnel to perform emergency measures necessary to contain any on-site spills and to dispose spilled materials and associated contaminated material (e.g., soil, debris, and similar materials) to approved disposal areas. The collected on-site spill and contaminated material shall be segregated from other material on-site, properly handled, and disposed in approved areas and in accordance with Federal and state regulations at no expense to the City of New York.

E. Off-site (transportation related) spills of decontamination water and other liquid wastes shall be handled as per the approved Emergency Spill Control Plan. The Plan may consider use of subcontractors to control, contain, remove, and dispose the off-site spills and resulting debris.

F. The Contractor shall provide equipment and personnel to perform decontamination measures that may be required to remove spillage from previously uncontaminated structures, equipment, or material. Decontamination residues shall be properly disposed of in approved manner at no expense to the City of New York.

G. In the event of a spill, the Contractor shall, at a minimum, take the following actions:

1. Take immediate approved measures to control and contain the spill.
2. Immediately, or at the first available instance, notify the Commissioner.
3. Immediately, or at the first available instance, notify the City of New York's Site Construction Supervisor and any applicable regulatory agencies.
4. Take necessary approved steps to clean up the spill including spilled material and any materials contaminated by the spill.
5. Notify the Commissioner of action taken to mitigate off-site spills.
6. Perform decontamination as required and approved.

1.03 SUBMITTALS:

A. The Contractor shall submit a comprehensive Emergency Spill Control Plan that includes, but is not limited to, the following components for approval by the City of New York and Commissioner.

B. The Contractor's Emergency Spill Control Plan shall include, but is not limited to, the following:

1. Assess and report on the availability, location, and amount of spill control equipment and clean-up materials.
2. Training of personnel in spill control.
3. Contingency plan for on-site spills.
4. Contingency plan for off-site spills.
5. Identify off-site and on-site disposal areas.

C. Spill Event Procedures:

1. Decontamination Procedures: Decontamination procedures may be required after cleanup to eliminate traces of the substance spilled or reduce it to an acceptable level.

- a. The acceptable level will be subject to approval by the City of New York and Commissioner.
- b. Complete cleanup may require on-site or off-site disposal of contaminated materials.

- c. Personnel decontamination shall include showers and cleansing or disposing of clothing and equipment.
 - d. All contaminated materials including solvents, cloth, soil, and wood that cannot be decontaminated shall be properly containerized, labeled, and properly disposed as soon as possible in accordance with applicable Federal and State Laws, and with the approved Emergency Spill Control Plan.
2. Spill Incident Report: A written report detailing the spill or discharge shall include at a minimum, the nature and quantity of material spilled, the cause and resolution of incident, outside agencies involved, and date occurred.
- a. The report shall be submitted to the Commissioner within 24 hours of the incident.
 - b. The Contractor shall document on the drawings all spills and submit as part of the Record Drawings to the Commissioner at project completion.
3. Notification: The Commissioner and Site Construction Supervisor shall be notified immediately of a spill or discharge.
- a. If human health or the environment is threatened, as judged by the Commissioner, the Contractor shall immediately contact the agencies as listed in the Task Specific Waste Management and Spill Control and Response Plan, and as otherwise appropriate.

D. The Contractor shall submit Spill Incident Reports as required.

PART 2-PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 01 00

PROTECTION OF EXISTING FACILITIES

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. The work specified in this Section consists of the labor, equipment, tools, materials, and services needed to provide complete protection of all existing facilities during construction operations.
- B. Work included in this Section:
1. Location of Facilities.
 2. Notification of the City of New York, off-site Owners and Authorities.
 3. Coordination and Preparation.
 4. Protection of Facilities.
 5. Relocation of Facilities.
 6. Restoration of Property Markers.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 LOCATION OF FACILITIES:

- A. Prior to demolition, verify location of existing underground facilities near or adjacent to project.
1. Consult with the City of New York, owners of affected off-site facilities and arrange for field stake-out or other markings to show locations.
 2. Perform exploratory excavation at key junctures and other critical points to aid in ascertaining locations.
- B. Report field stake-out findings and results of exploratory excavations to the Commissioner if possible changes in project location or design are indicated because of suspected interferences with existing facilities. Allow the Commissioner sufficient time to determine magnitude of changes and to formulate instructions in that regard.
- C. If location of existing underground facilities is uncertain, apply careful excavation and probing techniques during construction to locate and avoid damage to same.

3.02 NOTIFICATION OF THE CITY OF NEW YORK AND AUTHORITIES:

- A. Prior to construction, notify the City of New York, including local Police and Fire Departments, of general scope, nature and planned progress schedule of the Work.

- B. When existing utilities, such as sewer, water, gas, telephone or electric power are damaged or disturbed during demolition, immediately notify the City of New York, affected owner, and the Commissioner.
- C. Notify Police and Fire Departments and the City of New York and any affected owners, immediately if hazardous conditions are created or have the potential for occurring, as a result of damage to existing facilities or as a result of other activities at project Site. Hazardous conditions could be created from: fire, explosion, escape of gas, escape of fuel oil, gasoline or industrial fluids, downed electrical wires, and disrupted underground electrical cables.

3.03 COORDINATION AND PREPARATION:

- A. Make preparations beforehand to repair and restore damaged utilities, including arrangements for standby materials and equipment to be promptly assembled at Site and utilized immediately.

3.04 PROTECTION OF FACILITIES:

- A. Plan and conduct demolition operations so that operation of existing facilities near or adjacent to the Work, including electric, telephone, sewer, water, gas or drainage utilities, are sustained insofar as the requirements of the project will permit.
- B. Protect existing facilities from damage or movement through installation of adequate support systems and use of proper equipment, including application of careful excavation and backfilling techniques in sensitive areas.
- C. Existing utilities and other facilities which are damaged by the Contractor's demolition operations shall be promptly repaired by Contractor to the satisfaction of the utility owner or, if he so elects, the utility owner will perform the repairs with his own forces. Under either arrangements, such repair work shall be done at Contractor's expense.
- D. When aboveground visible facilities such as poles, wires, cables, fences, signs or structures constitute an unavoidable interference, notify the Commissioner and utility owner regarding temporary removal and later restoration of the interfering item. Arrange with the Commissioner and utility owner to remove and later restore the interfering item to the satisfaction of the utility owner, subject to approval of the utility owner, or, allow the utility owner to perform such work with his own forces. Under either arrangement, such work shall be done at Contractor's expense.
- E. Take all necessary precautions to prevent fires at or adjacent to the work, buildings, and other facilities. No burning of trash or debris is permitted. Fire extinguishers are to be easily accessible in case of equipment fires, etc. and are to be maintained as required by OSHA.

3.05 RELOCATION OF FACILITIES:

- A. If the location or position of an existing gas pipe, water pipe, sewer, drain, conduit, or structure requires its removal, realignment or change, such alteration shall be completed as directed by the Commissioner at the Contractor's cost as part of his base bid.

- B. Uncovering, supporting and sustaining such facilities before its removal or before and after its realignment or change, shall be the Contractor's responsibility as part of the Work of this Contract.

3.06 RESTORATION OF PROPERTY MARKERS:

- A. Property corner markers, boundary monuments, etc., disturbed or moved by the Contractor's operation shall be restored, in conformance with the property deed description, by a licensed land surveyor. Restoration of the property corner markers or boundary monuments shall be certified by said surveyor on a map prepared by him which shows the work accomplished. One copy of the map shall be given to the City of New York and one copy given to the Commissioner.

END OF SECTION

NO TEXT ON THIS PAGE

**SECTION 02 03 50
MAINTENANCE AND PROTECTION OF TRAFFIC**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The applicable provisions of Division 1 shall apply to this Section.
- B. References:
 - NYCDOT Bureau of Traffic "Regulation Manual on Temporary Traffic Control by Street Barricades and Channelization." latest edition.
 - Manual of Uniform Traffic Control Devices (MUTCD) prepared by FHWA, latest edition.
 - New York State Manual of Uniform Traffic Control Devices Supplement, latest edition.
 - Standard NYCDOT Highway Specifications (NYCDOTSS), latest edition.
 - Standard NYSDOT Specifications - Construction and Materials, latest edition, Section 619 (NYSDOTSS).

1.2 SUMMARY

- A. It is intended for all construction activities related to this project to be performed within the limits of the project site without impacting adjacent public areas. However, should the need arise for this work to temporarily affect public areas, then the contractor is responsible for providing adequate maintenance and protection of traffic measures that meet all required City and State standards and requirements. The scope of this specification section is to maintain and protect vehicular and pedestrian traffic by segregating the public from construction activities and work zones.
- B. Should a Maintenance and Protection of Traffic plan be required for this project, the provisions of Section 1.06.44 Maintenance and Protection of Traffic of the NYCDOT Highway Specifications shall apply. This section of the NYCDOT specifications requires that the contractor comply with the following elements (noted below in summary form, see complete Section 1.06.44 for additional information):
 - 1. Contractor to observe the laws and ordinances of the City in relation to obstruction of the streets.
 - 2. Contractor to maintain traffic for streets that are presently in use and maintain access to properties.
 - 3. Contractor to be responsible for maintenance of streets that are being used by contractor.
 - 4. Contractor to provide, install and maintain all necessary barricades, lights, reflectors, signs as required for the proper control of traffic and for the safety of the public.
 - 5. Contractor to provide temporary walks and bridges for pedestrians and vehicles as required.
- C. Should pedestrian or vehicle detours be required to complete this project, contractor is required to implement detour plans in a manner that complies with the Maintenance and Protection of Traffic requirements described in this specification. This includes, but is not limited to, installation of all necessary temporary barricades, lights, reflectors, signs, flaggers and crossing-guards as required for the proper control of traffic and for the safety of the public.

- D. During construction activities, flaggers and crossing-guards are to be provided at the site vehicular entrance and exit points in order to enhance the safety of the pedestrians and cyclists located adjacent to the project site. As required, these flaggers and crossing-guards are to be stationed at the pedestrian pathway/bikeway corridor in order to appropriately manage and direct pedestrians, cyclists and construction vehicles and provide safe crossings of these traffic streams. Flaggers will act to direct construction traffic into and out of the work zone and within the work zone. Crossing-guards will act to direct pedestrian, bicycle and vehicular (non-construction) traffic outside of the work zone. During construction activities, crossing-guards will be continually present at entrance and exit locations, while flaggers will only be present when construction vehicles enter and exit the site. It is noted that the site exit is signalized and exiting vehicles will only exit during the appropriate signal phase. Flaggers and crossing-guards are to reinforce the existing signalization at this location.
- E. NYSDOT Work Permit is to be obtained by contractor. Contractor to meet the following requirements:
1. The permit will be issued to the Sanitation Department and will be signed by an authorized manager at the Sanitation Department. Contractor to coordinate with Sanitary Department as required to obtain permit.
 2. Contractor to provide appropriate liability insurance coverage as required by NYSDOT.
 3. Contractor (unless otherwise noted) is to post bond for potential damage to NYSDOT facilities during site demolition work. Bond amount to be determined by NYSDOT.
 4. Contractor to provide information to NYSDOT, as required, to satisfy NYSDOT work permit request. This includes, but is not limited to, the provision of project schedule and work zone information, contact information, site representative information, copies of contract drawings, and documentation that contractor has met insurance and bonding requirements.

PART 2 - PRODUCTS

2.1 TRAFFIC CONTROL DEVICES

- A. As required, the Contractor shall provide all traffic control devices such as traffic cones, flashing arrow boards, warning signs, fencing, temporary concrete barriers, flaggers and crossing-guards and directional signage for pedestrians, etc. as specified and shown on the plans or required to control the work area.

PART 3 - EXECUTION

3.1 GENERAL

- A. As required, the Contractor shall prepare a maintenance of traffic plan for all work operations for approval by NYSDOT, NYCDOT and the Engineer.
- B. Maintenance of traffic shall receive the full attention of the Contractor. All operations shall be conducted to keep interference with all traffic at a minimum and to maintain the safety of all concerned.
- C. As required, the Contractor shall notify the New York City Office of Construction Mitigation and Coordination and the Bureau of traffic Operations at least 30 calendar days before starting construction.
- D. Furnish, install, relocate, maintain and remove all traffic control devices required to maintain and protect traffic during periods of construction as shown on the plans.
- E. All maintenance and protection work and control devices shall conform to applicable sections of the MUTCD (prepared by FHWA). NYS Supplement to the MUTCD, NYCDOTSS, NYSDOTSS and with NYCDOT "Regulation Manual on Temporary Traffic Control by Street Barricades and Channelization".
- F. If the approved plan is not strictly adhered to, the City of New York has the right to direct that any affected work be immediately discontinued. Such work shall not be resumed until the City of New York is assured and determines that the work will be performed in conformity with the approved plan. The Contractor shall have no claim against the City of New York for losses or delays caused by such stoppages of work.
- G. If at any time conditions warrant modifications to procedures included herein, the Contractor shall perform the modifications as ordered by the Engineer.

3.2 MAINTENANCE

- A. The Contractor shall maintain and be responsible for all devices and equipment for the duration of the work.
- B. It is the responsibility of the Contractor to ensure that all traffic control devices are maintained in their proper locations at all times.
- C. All construction signs shall be covered when the work they pertain to is not in progress and removed when the work they pertain to is completed.
- D. As required, travel lanes shall be swept clean of debris and all ice and snow must be removed before the lane is reopened to traffic.

END OF SECTION 02 03 50

Demolition of DSNY Facilities at Gansevoort Peninsula
New York, New York

DDC Project #S216-404A

No Text on This Page

Maintenance and Protection of Traffic

02 03 50-4

**SECTION 02 41 00
BUILDING DEMOLITION AND DEBRIS REMOVAL**

PART 1 - GENERAL

1.01 APPLICABLE REQUIREMENTS

- A. The Contract Drawings and all other Specification Sections along with all provisions included within the General Conditions apply to this section.
- B. All work performed by the Contractor under this Contract shall comply with all applicable Federal, State, and Local codes, laws, ordinances, regulations, and guidelines for demolition and related work.
- C. The Contractor must accept the site as is and shall be deemed to have inspected the site and reviewed all Contract Documents prior to submitting a bid.

1.02 SUMMARY

This Section includes the following:

- A. Coordination and acquisition of demolition-related permits
- B. Planning and preparation for the Work, including but not limited to:
 - 1. Scheduling of the Work in work phases, including abatement of asbestos and other hazardous materials.
 - 2. Demolition, including specification of demolition design, fabrication, and installation of systems as required for demolition.
- C. Creation of a secure barrier around the site
- D. Abatement of hazardous materials.
- E. Demolition and removal of existing Gansevoort peninsula buildings and structures, as indicated.
- F. Demolition and removal of selected site elements.
- G. Removal and/or abandonment (termination and sealing) of select utilities.
- H. On-site concrete and masonry crushing operations.
- I. Temporary site stabilization, backfill, and grading for future work.

1.03 RELATED DOCUMENTS AND SECTIONS

- A. General Conditions
- B. Refer to Contract Drawings. In addition, previous existing as-built and design drawings will also be provided for reference.

- C. The Contract drawings are for information purposes only and are not intended to be all-inclusive or to illustrate every and all conditions, details, arrangements, etc. They are to be used in conjunction with a detailed and comprehensive site visit to examine the buildings and actual field conditions.

1.04 SITE AND BUILDING DESCRIPTIONS

- A. The Department of Sanitation of New York (DSNY) facilities are located at the Gansevoort Peninsula at 2 Bloomfield Street in Manhattan, New York. This sanitation facility consists of the DSNY Destructor Plant, which ranges from a 6-story to a 1-story structure, the 2-story M5 Garage abutting the Destructor Plant, a 1-story salt shed and a 1-story Marine Transfer Station (MTS), which is situated over the Hudson River on piles. The landward portion of the site is connected to the MTS facility via an elevated ramp that transitions from the site grades to the elevated MTS structure over the water. This Specification pertains to the demolition of all of the buildings, their associated utilities, and the existing site features including, but not limited to, MTS ramp, asphalt layers, concrete sidewalks, walls, bollards, stairways, ramps, railing, bushes, trees, curbing, fences, light poles and fixtures.

1.05 SCOPE OF WORK

- A. Overall work under this Contract shall include all labor, materials, equipment, supervision, coordination efforts, permitting costs, certificate costs, services, filing fees, testing costs, security, insurance and all other associated or related items specified herein that are necessary and are required to complete the Work. Work elements shall include, but not be limited to the following:
1. Installation and maintenance of a temporary chain link-fence with windscreen on top of jersey barrier totaling 8-foot in height around the site, with entrance gates, at locations indicated on the Contract Drawings and as required to properly and safely secure the demolition operation in accordance with Local and State requirements.
 2. Installation and maintenance of roadway construction signage and associated traffic measures as required.
 3. Compliance with the State Pollutant Discharge Elimination System (SPDES) permit from New York State Department of Environmental Conservation, as well as installation and maintenance of soil erosion and sediment control measures. Protect the adjacent Hudson River at all times and ensure no demolition debris or sediment enters the River.
 4. Implementation of all safety measures deemed necessary or required by governing authorities to protect from harm or damage adjacent and on-site persons, property, buildings, homes, businesses, facilities and utilities.
 5. Asbestos and hazardous materials abatement shall be performed prior to any demolition activities.
 6. The disconnection and capping/termination of all building services, e.g. water, sewer, gas, electric, telephone, etc. in accordance with the Contract Drawings and all local regulation and utility service company requirements.
 7. Removal and legal disposal of all contents of the building to be demolished under this Contract, including but not necessarily limited to: mechanical equipment, reservoir tanks, plumbing fixtures, and such to be seen at the pre-bid walk-through.
 8. Removal and legal disposal of existing hard surface treatments, including all fencing, gates, pavements, concrete curbs, sidewalks, stairways, railings and other fixed or free standing items (e.g. equipment and tank supports, bollards, signs, sign posts, light poles, light pole

- bases, walls, etc.) within the limit of demolition line. The existing asphalt layers shall be milled and recycled to the greatest extent possible.
9. The obtaining and payment for temporary utility (water, electric, telephone) and other services necessary for proper execution of the demolition work.
 10. Demolition and complete debris removal and legal disposal off-site of all buildings, building appurtenances, and other structures to be demolished as indicated on the Contract Drawings.
 11. Removal and disposal of the building foundation systems to the bottom of the pile caps. In areas where the foundation system is deeper than five feet, with the exception of the pile caps and grade beams, the Contractor shall leave the foundations below five feet in place and puncture all slabs below five feet to allow for proper drainage prior to backfilling.
 12. Termination and removal of utility services as indicated on the Contract Drawings including, but not limited to, electric, gas, water, sanitary sewer, telephone, etc.
 13. Removal and proper disposal of existing fill material, including, but not limited to, soil, buried asphalt layers, brick and all previous historic foundations or concrete, to a depth of five feet below existing grades throughout the building footprints and site within the landward limit of demolition line. The only exception would be in any areas where groundwater is encountered before a depth of five feet below existing, pre-demolition grades is reached. However, the Contractor shall make every effort to coordinate the excavation operations where groundwater is encountered with the low tide fluctuations to provide the maximum removal area.
 14. Backfill excavations made to remove existing below-grade utilities and any other utility structures within the limit of demolition unless otherwise shown to remain. Backfill shall be with approved, compacted fill in accordance with the Backfill of Building and Utility Removal Areas (312300 - 2.01). Contractor to provide positive drainage and maintain safe site conditions.
 15. Provide security of the work site for the duration of the project on an around-the-clock basis to prevent unauthorized entry into the site.
 16. Restoration of site and building area grades to meet existing site perimeter grades as indicated on the Contract Drawings. Contractor shall use imported course sand material as backfill material with a 9-inch thick gravel/crushed stone for the final surface in accordance with the Contract Drawings and the Backfill of Building and Utility Removal Areas (312300 - 2.01).
 17. For recycling requirements and limitations on hauling distances see Section 017419, Construction and Demolition Waste Management.
 18. Provide required inspection, testing and progress reports to the Resident Engineer.
 19. Notes on the Contract Drawings that indicate existing site utilities and features to remain that are located outside the limit of demolition line to be preserved and protected are for informational purposes only. No work is required unless demolition activities (i.e. construction traffic, etc.) encroach upon these existing site utilities and features.
 20. Concrete aggregate generated from the demolition of the on-site buildings shall be reused as subbase course for the temporary asphalt roadway, to the maximum extent practical.

21. Contractor to provide required shoring protection design, where necessary, during demolition activities, which shall be signed and sealed by a NY state licensed engineer for review and approval by the Resident Engineer in any areas where slopes exceed OSHA standards.

1.06 QUALITY ASSURANCE

- A. All demolition activities shall be completed in accordance with all applicable Federal, State and Local regulations and industry standards.
- B. Contractor shall assign a competent and experienced Demolition Superintendent representing Contractor and who shall be present at the site daily during all operating hours of the project. The Demolition Superintendent shall be responsible for overseeing demolition operations and ensuring that the designated demolition and health and safety procedures are implemented in the field.
- C. The Resident Engineer reserves the right to direct any inspection that is deemed necessary. The Contractor shall provide free access to the site for inspection activities.
- D. The Contractor shall repair or remove any items that are damaged due to the Contractor's activities as directed by the City of New York and/or Commissioner. Repair, replacement and installation of damaged items shall be performed at no additional compensation and to a condition at least equal to that which existed prior to start of work.

1.07 SUBMITTALS

- A. See General Conditions for submittal requirements.

B. UTILITY SCHEDULE

1. The Contractor shall submit to the Resident Engineer and all affected utility/service companies, a proposed schedule of all necessary utility/service shut-offs, cappings and continuations of utility services as required no later than 30 days before the commencement of demolition. The Contractor shall provide the Resident Engineer with written confirmation from all utility or service companies serving the site that service has been terminated prior to capping, abandoning or removal of any such utility and prior to commencement of building demolition.
2. Contractor shall, during its work, accurately locate and mark on a set of Contract Drawings the location of all underground utilities and services that have been capped and those that are to remain within the limit of demolition.

C. DEMOLITION SCHEDULE/PLAN

The Contractor shall submit for review and approval a detailed written description of the methods and operations of demolition and a schedule for all proposed work to the Resident Engineer no later than 30 days prior to the commencement of demolition work. This submission shall include a calendarized schedule of the proposed work and a step-by-step description of the work to be performed pertaining to preparation for demolition, protection of existing structures and adjacent community, labor forces, demolition rubble management and disposal and other pertinent items. The Contractor shall accommodate any recommended alterations and requirements by the Resident Engineer owing to reasons of public safety.

D. PERMITS

Prior to the commencement of work, the Contractor shall obtain all necessary permits and certificates associated with utility disconnections, and building demolition work from the New York City Department of Buildings (DOB) and any other Federal, State or Local authorities having jurisdiction over this project. The Contractor shall incur all fees and other requirements associated with obtaining

the required permits and certificates. Record copies of all permits executed and certificates obtained shall be sent to the Resident Engineer. Costs associated with permit and certificate procurements, including plan and permit preparation, revisions, filing fees, etc., shall be borne by the Contractor.

The following permits and certificates may be applicable and shall be obtained by the Contractor prior to applying for and obtaining general demolition permits from the City of New York.

- a. Exterminator Certificate.
- b. Board of Health approval.
- c. Demolition contractor, Licensed.
- d. Approval and receipt of permit for removal and disposal of containerized solid and liquid wastes, including State registration, where required.

Contractor shall be responsible for any and all violation levied against the Contractor and/or City of New York for failure to obtain or comply with required permits or certificates.

E. TRAFFIC

The Contractor shall submit for approval 15 days prior to the start of demolition work a traffic control plan to the Commissioner, the New York City Police Department, the New York City Fire Department, and New York Department of Transportation, if required.

F. INSECT AND RODENT CONTROL

The Contractor shall submit to the Commissioner an insect and rodent control plan and schedule. Extermination work shall be performed and completed by a New York State certified professional pest control firm no later than 15 days before commencement of demolition. The requirements of the insect and rodent control plan are described in paragraph 3.04 of this specification section.

G. POLLUTION CONTROL MEASURES

The Contractor shall submit a pollution and dust control plan to the Commissioner not less than 10 days prior to the commencement of demolition work. The plan shall outline proposed methods for dust control, noise control and maintaining the surrounding streets and buildings in a clean condition for both demolition operations and during debris removal (See paragraph 3.06 of this specification section).

H. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

See General Conditions for requirements.

I. DEMOLITION CLOSE-OUT

1. Contractor shall submit copies of all utility shut-off plans, regulatory approvals, monitoring reports, disposal documentation, and concrete reuse documentation as part of the demolition close-out. Final acceptance of Contractor's work will be based on Commissioner's review and approval of close-out documentation.
2. Contractor shall submit a comprehensive Waste Management Report at the completion of the Demolition. For reporting requirements, see General Conditions.

1.08 PROJECT MEETINGS

A. PRE-DEMOLITION

The Contractor, along with all designated subcontractors, shall attend a pre-demolition meeting scheduled by the Commissioner prior to commencement of work to resolve questions pertaining to the work and to establish basic administrative procedures and schedules.

B. PROGRESS

Once the demolition work has begun, the Contractor shall schedule, administer and attend meetings with the Commissioner once a week or as deemed necessary by the Commissioner to maintain optimum degree of communications between interested parties. The Contractor shall include selected subcontractors at such times as their interests may be involved.

1.09 OCCUPANCY

A. Buildings adjacent to the site will maintain their present occupancy and function.

B. The Contractor shall take any and all measures necessary to protect from harm and damage, persons and property from demolition activities, as well as maintaining vehicle and pedestrian traffic around the demolition area. See Section 1.13 for minimal additional protection requirements.

1.10 CONDITIONS OF STRUCTURES

A. Conditions existing at the time of inspection for bidding purposes will be maintained by the Commissioner insofar as practicable. The Contractor's bid affirms the acceptance of the site, building and its interior "as is" unless specifically otherwise stated by the Commissioner at the pre-bid inspection.

1.11 SALVAGED MATERIALS

- A. Department of Sanitation of New York (DSNY) will remove all items that they deem salvageable prior to demolition activities. The items that shall be salvaged and stockpiled for future use are:
1. existing cobblestones, where encountered beneath the asphalt layers and also adjacent to the existing seawall;
 2. existing granite curbs within the limit of demolition line;
 3. asphalt cement (to be milled and recycled); and
 4. concrete aggregate (to be crushed and screened for potential reuse as temporary asphalt access road subbase material only).

1.12 TRAFFIC

The Contractor shall conduct demolition operations and removal of debris in a manner that ensures the least interference with streets, pedestrian walkways, and other adjacent occupied facilities. If required, the Contractor shall prepare a traffic control plan and obtain approval from the Local Building, Fire and Police Departments of said plan for all aspects of the project (See Section 02 03 50 for additional requirements).

1.13 PROTECTION

A. Safety and protection of the surrounding community and property shall take the highest priority during demolition operations.

- B. The Contractor shall ensure free and safe passage of persons around the area of demolition. Special attention should be paid to the existing adjacent asphalt jogging and bicycle paths along Route 9A with regard to safety and protection. All operations shall be conducted so as to prevent damage to adjacent buildings, structures and other facilities and injury to persons. This shall include but not necessarily be limited to the installation and maintenance of protective structures when necessary such as catch platforms, tarpaulin or plywood barriers, trailer boxes, sidewalk sheds (bridges) as required by the New York City Building, Fire and Police Departments, or the Commissioner.
- C. The Contractor shall make a careful examination of the structures to be demolished and of the adjoining structures, property and utilities which are to remain and take whatever precautions are necessary to carry on operations so as to prevent any settlement, collapse, damage from falling debris or other impacts to adjacent structures, sidewalks, paving, utilities and other existing features. During all operations, the Contractor is responsible for the structural integrity of these structures and surrounding structures relative to any problems or damages resulting from the performance of the Contractor's work. The Contractor shall notify the Commissioner immediately if the safety of an adjacent structure or facility is endangered or if any change has occurred.
- D. The Contractor must provide interior and exterior shoring, bracing or support to prevent movement or settlement of the structures to be demolished when safety concerns warrant. Any damage inflicted upon adjacent off-site structures, property, construction or utilities by the Contractor's work must be corrected promptly by the Contractor at no cost to the City of New York.
- E. All work adjacent to occupied buildings which may produce fire hazards or create nuisances or safety and health hazards from noise, vibration, gases, vapors, fumes, dust mists, or odors shall not be performed unless preventive controls or measures including, but not necessarily limited to those shown on the Contract Drawing and/or as specified within this Specification are implemented. Special attention is brought to adjacent building fresh air intakes, air conditioning units, etc. which need protection from dust during demolition. Protective procedures shall not begin until reviewed by the Commissioner. Such review shall in no way relieve the Contractor from his responsibility to execute the work in a safe manner and in accordance with all applicable Federal, State and Local requirements.
- F. Job site safety is entirely the responsibility of the Contractor. The Contractor shall execute the work in a manner that is safe for his workers and persons in and around the job site. Any possible hazards resulting from the demolition activities shall be corrected by the Contractor prior to the continuation of work in that specific area.

G. VIBRATION MONITORING

1. The Contractor shall be responsible to provide third-party vibration monitoring during demolition activities. A minimum of three seismometers shall be securely installed within the limits of the project site at locations closest to any structures which may be affected during demolition. The Commissioner may request additional monitoring points be installed by the Contractor at their discretion. The vibration monitoring shall be conducted remotely to alert the Commissioner, Construction Manager and Contractor via email in the event that any of the thresholds described below have been exceeded.
2. During all demolition activities, the vibration limits in terms of Peak Particle Velocity (PPV) are as follows:
 - a. Threshold for Recording:
PPV = 0.1 inch per second
 - b. Threshold for Investigation:
PPV = 1.0 inch per second for frequencies > 20 Hz
PPV = 0.5 inch per second for frequencies < 20 Hz

- c. Maximum Allowable:
PPV = 2.0 inch per second

If the "*Threshold for Investigation*" is reached or exceeded, an alert will be sent to all parties, following which, ways to reduce vibrations will be discussed to provide an acceptable solution to mitigate any vibration exceedances. If the "*Maximum Allowable*" limit is reached or exceeded, the particular demolition operation would immediately cease pending an exploration of ways to attenuate the vibrations.

3. The values described above are tentative and field conditions may require adjustments lower, if necessary, to protect nearby structures to remain. In addition, these monitoring requirements are the minimum required. The Contractor shall establish all necessary monitoring measures as necessary to be informed of the conditions around the site and confirm that demolition activities are not adversely impacting surrounding structures. The Contractor shall be responsible to monitor conditions during demolition activities to verify that protection requirements specified herein are maintained.
4. The Contractor shall submit a monitoring plan consisting of monitoring point locations and method of monitoring for review and approval by the Construction Manager and Commissioner prior to the start of demolition activities.

1.14 EXISTING UTILITIES

- A. The approximate locations of existing utilities are shown on the Contract Drawings. All utility locations are approximate and additional utilities that are or may be impacted by the work, may exist. The Contractor shall be responsible for protecting all utilities during construction. All existing utilities shall be field-verified and any discrepancies shall be reported to the Commissioner.
- B. The Contractor shall maintain existing utilities within the public right-of-way and those shown to remain on the Contract Drawings. The Contractor shall promptly repair or have repaired by applicable utility company any damage incurred to utilities during demolition work at no cost to the City of New York.
- C. The Contractor shall not interrupt existing utilities serving any off-site facilities, except when authorized in writing by authorities having jurisdiction and the Commissioner. The Contractor shall provide temporary services during interruptions to existing utilities, as acceptable to governing authorities and the Commissioner.

1.15 TEMPORARY LIGHTING

See General Conditions for temporary lighting requirements.

1.16 TEMPORARY SERVICES AND FACILITIES

See General Conditions for temporary services and facilities requirements.

1.17 WORKING HOURS

See General Conditions for working hours.

1.18 LIMIT OF DEMOLITION LINE

- A. The limit of demolition line for demolition work is shown on the Contract Drawings. No equipment, materials, and/or trailers shall be kept or stored outside this limit.

- B. Other trades and work may be on-going on-site during demolition operations. The Contractor shall coordinate their work so as not to interfere with work of other trades.

1.19 UNACCEPTABLE PERFORMANCE

- A. The Contractor shall remove from the project any individual employed by the Contractor who is performing work in an unacceptable manner as determined by the Commissioner. The Contractor shall not be allowed claims for delays or down time resulting from the removal of such employees.

1.20 PRE-DEMOLITION SURVEY

- A. Prior to demolition, a pre-demolition survey shall be completed. The Contractor shall photograph (in color) building faces, roadways, and other facilities to remain which are located adjacent to structures to be demolished. The Contractor shall prepare an as-built survey of the exterior piles for the Marine Transfer Station prior to demolition. A sewer video of the NYC DEP combined/sanitary sewer pipes in Gansevoort and Bloomfield Streets and any other sewers connected to existing outfalls along the existing seawall shall be conducted and a report shall be prepared documenting the current condition of the the sewers.
- B. In addition, the survey shall include detailed written descriptions of the condition of the existing site features and buildings adjacent to the proposed demolition. The survey shall also estimate the quantities of recyclable materials based on visual observation and takeoffs from plans and elevations, as directed by the Commissioner. The photographs shall be dated and noted describing location and elements of the photograph. They shall be placed in a bound notebook and two copies with the negatives (if film is used, otherwise digital images shall be burned to a compact disc) shall be given to Commissioner and Architect not less than 5 days prior to the start of demolition.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials are as specified on the Contract Drawings when applicable. See related sections for additional product specifications.
- B. All related monitoring equipment shall be supplied by the Contractor.

PART 3 - EXECUTION

3.01 PROJECT FENCING

- A. The Contractor shall construct a temporary chain link-fence with windscreen on top of jersey barrier totaling 8-foot in height and with swing gates at locations shown and as necessary to properly and safely secure building demolition operations in accordance with Local and State requirements. No demolition work shall begin until the project site is secured and the fence is completely installed and approved by the Commissioner. The temporary construction fencing shall be relocated as indicated on the Contract Drawings to remain on site as permanent fencing after project completion. The chain-link fencing and jersey barriers shall be accepted as the permanent fence after project completion provided it is still in a satisfactory condition. If the temporary chain-link fencing or jersey barriers are damaged during demolition, it shall be replaced at no cost to the City of New York prior to being accepted as the final permanent fence. New gates shall be installed post demolition as indicated on the Contract Drawings.

3.02 SOIL EROSION AND SEDIMENT CONTROL

See Section 31 25 00 for requirements.

3.03 TRAFFIC

See Section 02 03 50 for requirements.

3.04 EXTERMINATION

- A. The Contractor shall employ a State licensed pest control firm with a minimum of 3 years of professional experience with commercial buildings and demolition/construction conditions to design and implement an Insect and Rodent Control Plan for removing rodents and other pests from the building to be demolished and from the immediate surrounding area in accordance with governing health and building regulations. Implementation of the Insect and Rodent Control Plan shall commence no later than 15 days prior to the scheduled start date for demolition and must be completed prior to the permit application procedure. The plan shall be submitted to the Commissioner for review and approval 10 days prior to the commencement of extermination work under this Contract.
- B. The insect and rodent control plan shall address the following: the removal of rodents, insects and major pests anticipated to be encountered; bait type and bait setting procedures; rodent and pest removal procedures; containment and control of migration of rodents from the project site; and other necessary and required measures. Final certification by the Contractor's pest control firm verifying compliance with health and building regulations and that the building(s) are clean of all insects, rodents and major pests shall be submitted and received by the New York City Health and Building Departments or appropriate governing authority prior to the scheduled demolition start date. The Commissioner shall be copied on all correspondences.

3.05 UTILITIES

A. GENERAL

Existing utilities service shall not be interrupted unless authorized in writing by authorities having jurisdiction and the City of New York of the utility. Any temporary interruption necessary shall be directly coordinated and supervised by utility company personnel. The Contractor shall provide temporary services during interruptions to existing utilities, as acceptable to governing authorities and the affected utility companies.

B. MAINTENANCE

The Contractor shall maintain and protect from damage all existing above and below ground utilities either servicing adjacent structures to remain, outside of the limit of demolition line, or specifically indicated to remain. This includes, but is not necessarily limited to, above ground utility lines and transformers, water lines, gas lines, storm lines and catch basins shown on the Contract Drawings.

The Contractor shall immediately repair or have repaired by the appropriate utility company any damage incurred by utilities during demolition work at no cost to the City of New York or municipality. The Contractor shall be responsible for notifying and coordinating the appropriate utility companies the shut-off of utilities that are to be abandoned as part of this Contract.

C. ABANDONMENT/REMOVAL

1. Disconnection, plugging and removal of utility services, and sewer lines and appurtenances is part of this work and shall be performed prior to building demolition, except where hydrants and storm sewers must be maintained during demolition operations in which case hydrant, hydrant lateral and storm sewers shall be preserved and protected during and after demolition activities. The Contractor shall identify all utilities and sewers on-site and determine if utility laterals to the

buildings to be demolished are direct and exclusive to the building before disconnection is performed.

2. Prior to removal, all utilities and sewers shall be properly purged and evacuated of all residual gases, oils, etc. or de-energized in the case of electric, telephone or other communications services. All purging and testing shall be approved by local utility or sewer companies and governing authorities having jurisdiction.
3. The Contractor or appropriate utility or sewer company (if required) shall seal and/or plug the ends of all utilities indicated to be abandoned and removed with blank plates or caps and new valves where necessary as determined by the Commissioner. All plugs shall be inspected by the Commissioner appropriate utility or sewer company prior to backfilling.
4. All utility disconnections shall be performed no later than 15 days prior to the scheduled start of demolition and must precede the demolition permit application procedure.
5. The Contractor shall construct a brick or concrete bulkhead or plug at pipe opening in an existing manhole or other structure of a minimum 20-inch thickness. For sanitary sewers, the plug shall be waterproofed with ½-inch thick layer of mortar and two coats of waterproofing on the exterior of the plug. Mortar the inside of the plug so that it is smooth with the wall. Expose the pipeline at a manhole or structure and remove at least 2 feet of pipe beginning a minimum of 20-inches from the outside face of the structure.
6. The Contractor shall remove the frame and cover or grate. The Contractor shall remove the structure to at least 5 feet below finished grade, break or perforate the bottom of the structure to provide drainage, and backfill the structure as specified in Section 31 23 00. The Contractor shall plug both ends of the pipeline to be abandoned at manholes or structures with a minimum 9-inch thick brick or concrete bulkhead.
7. The Contractor shall expose, cut, and cap ends of water mains where shown, place concrete blocks behind cap to bear between the cap on the pressurized main and undisturbed earth in accordance with the details, and backfill excavation to finished grade.
8. Where water mains are to be removed to a tee or valve, the Contractor shall expose, cut, and plug the pipeline at the fitting, remove all abandoned valves and valve boxes within the limits of the abandonment shown, place concrete blocks behind plug to bear on undisturbed earth in accordance with the details, and backfill excavation to finished grade.
9. The Contractor shall abandon water services by exposing the corporation stop at the main, turning stop off, disconnecting the service line from the corporation stop, inserting a plug or cap on the exposed end of the corporation stop, and backfill excavation to finished grade.

D. FLUSHING AND CLEANING

1. The existing stormwater/combined sewer pipes to remain in the site and in Gansevoort and Bloomfield Streets shall be flushed and cleaned at the end of demolition activities to verify that the pipes are free of any existing sediment or demolition debris.

3.06 POLLUTION CONTROLS

A. DUST

During demolition and debris removal operations, the Contractor shall continually use water sprinkling and other suitable methods to minimize the amount of dust and dirt, rising and scattering in the air, to the lowest practical level possible. Special attention should be paid to the existing adjacent asphalt

jogging and bicycle paths along Route 9A to minimize any dust within this area. Requests made by the Local authority having jurisdiction or the Commissioner regarding pollution controls shall be promptly implemented by the Contractor. The Contractor shall not use water when dangerous flooding or icing may occur. The Contractor shall comply with all governing regulations pertaining to environmental protection, soil erosion and dust control and install all control measures indicated on the Contract Drawings. It is the Contractor's responsibility to coordinate with the appropriate utility authority to use the existing hydrants on the peninsula and/or provide water trucks for the purpose of dust control during demolition at no additional cost to the City of New York.

B. CLEANING

The Contractor shall maintain the cleanliness of streets and properties at all times by removing dirt, dust and debris produced by demolition operations. This shall be done on a daily basis. After demolition and debris removal is complete, the Contractor shall return adjacent structures and roadways to the conditions existing prior to the start of work. Power washing or other means deemed necessary by the Commissioner shall be implemented by the Contractor to achieve this objective. The Contractor shall provide enough refuse containers for collecting construction/demolition debris throughout the duration of all work.

C. NOISE

The Contractor shall make all attempts necessary to reduce noise emissions from the site during demolition operations. Noise levels shall be maintained at or below State Standards and/or as required herein. Special attention should be paid to the existing adjacent asphalt jogging and bicycle paths along Route 9A with regards to the noise levels along this area. All machinery and equipment shall have mufflers or noise reducing devices installed.

3.07 LINE PURGING

- A. The Contractor shall be responsible for safely purging all mechanical and plumbing lines and other related systems (including equipment) within the building that may contain residual oils, gases, etc. The collected materials shall be the sole responsibility of the Contractor who shall legally dispose of these materials in accordance with Federal, State and Local regulations (if applicable) including but not necessarily limited to NYSDEC requirements. The dumping of these materials on-site shall not be permitted.
- B. Pipe lines shall be drained or evacuated and residual materials collected in proper containers. Equipment shall be drained of oils, lubricants, coolants, (i.e. freon, etc.) which shall be properly collected and disposed of prior to removal.

3.08 DEMOLITION

- A. The demolition work and safety procedures shall conform to the standards set forth in these Specifications and in the Demolition Safety Manual, latest revision, prepared by the National Demolition Association. Additionally, all cranes, concrete shears and other major pieces of demolition equipment utilized in the execution of the demolition work shall be periodically and thoroughly inspected by certified personnel on a monthly basis. Copies of the inspection reports and proof of crane insurance shall be maintained on-site at all times and shall be made available to the Commissioner immediately upon request.
- B. Prior to commencement of any demolition operations, the Contractor shall verify that hazardous materials and asbestos-containing materials have been abated and removed from the buildings in accordance with regulatory agencies having jurisdiction. The Contractor is to coordinate with the New York City Building Department Officials or any other applicable agency on the method of demolition.
- C. Under no circumstances shall explosives be used for any aspect of the demolition work.

- D. The buildings to be demolished under this Contract shall be demolished in their entirety from top to bottom up to the bottom of the pile caps. Demolition work shall proceed section-by-section and floor-by-floor, pulling or knocking exterior walls and columns into the building. Demolition shall proceed in such a manner that all debris falls away from adjacent buildings and all other structures including utilities that are to be maintained and protected. If wrecking ball methods are acceptable to the NYC Building Department for this project, the Contractor shall limit the back swing of the crane's boom such that the ball does not approach the site boundary or adjacent buildings under any circumstances.
- E. Prior to building demolition, each floor shall be pre-stripped of all non-recyclable, solid waste materials and items such as partitions, cabinets, fixtures, and plaster/lathing, etc. and segregated for disposal by the Contractor.
- F. The Contractor shall remove all building foundation walls, elevator pits, floor slabs, and columns to a depth of five feet. All below-grade site elements to be demolished, e.g. pits, manholes, piping, retaining walls and existing and previous building footings, etc. shall be removed in their entirety to a depth of five feet. In areas where the foundation system is deeper than five feet, with the exception of the pile caps and grade beams, the Contractor shall leave the foundations below five feet in place and puncture all slabs below five feet to allow for proper drainage prior to backfilling.
- G. Removal and proper disposal of existing fill material, including, but not limited to, soil, buried asphalt layers, brick and all previous historic foundations or concrete, to a depth of five feet below existing grades throughout the building footprints and site within the landward limit of demolition line. The only exception would be in any areas where groundwater is encountered before a depth of five feet is reached. However, the Contractor shall make every effort to coordinate the excavation operations where groundwater is encountered with the low tide fluctuations to provide the maximum removal area.
- H. Contractor shall coordinate with the Commissioner and all regulatory agencies having jurisdiction when determining methods of demolition to be used. All methods shall be in accordance with applicable Federal, State, and Local regulations and industry standards.
- I. Prior to the start of any major structural demolition activities, Contractor shall submit documentation indicating the methodology for removing the structural members and all temporary shoring requirements. The documentation shall be prepared by and signed and sealed by a licensed Professional Engineer in the State of New York. Contractor shall be responsible to complete the demolition work without disturbing, damaging, or otherwise impacting and of the adjacent properties within close proximity to the site.
- J. Any and all demolition methods and procedures employed by Contractor shall meet, at a minimum, the following criteria:
 - a. Demolition activities shall not disturb, damage or otherwise impacting buildings and structures to remain at the site.
 - b. Demolition by implosion is prohibited for this project.
 - c. All demolition activities shall be performed in strict accordance with all safety regulations and standard practices applicable to the method of demolition used.
 - d. Demolition debris shall not be permitted to fall outside of the construction fence at any time during the demolition operations. If this should occur, Contractor shall stop work and modify the demolition method to prevent further incident.

3.09 DISPOSAL OF DEMOLISHED MATERIALS

See General Conditions for requirements.

3.10 SITE GRADING

- A. At the conclusion of demolition, backfill all areas to the grades shown on the Contract Drawings.
- B. Refer to Section 31 23 00 for backfill and compaction requirements, imported material requirements, and final grade tolerances.
- C. Do not remove secure barriers or other safety systems until site is backfilled and safe for others to enter.

3.11 PROJECT RECORD DRAWINGS

- A. The Contractor shall mark in the field on a set of Contract Drawings all locations of removed and remaining building foundation elements and utility disconnections within the limit of demolition line. Existing foundation/pile size and locations and utility type, size, and depth-of-bury shall also be noted on this plan. The Contractor shall provide certifications from utility companies of complete and correct utility disconnections.

END OF SECTION

SECTION 02 41 13.23

HYDRAULIC SYSTEMS AND FUEL OIL PIPE REMOVAL

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. This specification covers the requirements and procedures for decommissioning hydraulic systems (furnace conveyor drives, truck lifts, elevators, etc.) and fuel oil/heating systems and procedures for limiting occupational and environmental exposure to oils when closing these systems. The Contractor shall furnish all labor, equipment, and materials required to perform all operations necessary to drain, purge, clean, and remove all hydraulic oil and fuel oil systems. The Contractor shall submit a work plan for the Commissioner's approval outlining their proposed plan for decommissioning all hydraulic and fuel oil systems.

1.02 REGULATORY REQUIREMENTS:

- A. All work must be performed in accordance with State, local, and Federal requirements as well as the requirements of the general provisions in the Specific Provisions Section of these specifications and the Contract drawings.

1.03 RELATED WORK:

- A. Section 02 41 19.16 Interior Demolition
- B. Section 02 51 00 Building Decontamination
- C. Section 02 51 29 Ash / Dust/ Debris Removal and Material Decontamination
- D. Section 02 65 00 Removal of Underground Storage Tanks
- E. Section 02 65 00.10 Aboveground Storage Tank Removal and Disposal
- F. Section 02 86 00 Removal of Drummed Waste and Decontamination Water

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 PREPARATION OF HYDRAULIC LIFT SYSTEMS:

- A. The Contractor shall be responsible for the shut-down, lockout, and tagging out of each hydraulic lift or elevator system prior to commencing work on the systems. This work shall be conducted in accordance with 40 CFR Part 1910.333 (b) (2).

3.02 REMOVAL OF HYDRAULIC OIL AND FUEL OIL:

- A. Contractor shall be responsible for removing the hydraulic oil from the reservoir tank, pit, or casing (i.e., Elevators or Lifts), and associated piping at each hydraulic lift system in a safe and proper way so as not to release substance into or on the land surface, waterway, or any other any portion of the environment. Similarly, fuel oil shall be removed from all heaters and heater supply piping. The Contractor shall comply with the Clean Air and Clean Water Acts. Residues on the interior of the tanks and piping shall be removed and cleaned. Steam or detergent solutions may be used to aid in the decontamination provided they are disposed of the same as the hydraulic system contents and do not introduce hazardous substances.
- B. Oil recovery may be accomplished by vacuum extraction/pumping the oils from the reservoir tank, removing the piston and valves, and draining or air-purging the associated piping, being careful to avoid any spillage. It may be necessary to hand-pump the last few inches of product. Cap the inlet end of the piping connected to the reservoir tank after removing product.

3.03 DISPOSAL OF OILS AND RESIDUE:

- A. The Contractor shall be responsible for transport and disposal of all product and residue recovered as part of preparing these systems for closure in accordance with applicable Federal, State, and local regulations, and as specified in Section 02 86 00 – Removal of Drummed Waste and Decontamination Water.

3.04 SPILLS/SURFICIAL FREE PRODUCT:

- A. The Contractor shall implement containment actions as necessary to minimize the effect of any spill or area having leakage associated with the hydraulic lift and fuel oil systems. All Site areas already impacted by spillage and leakage of all hydraulic and heating oil systems shall be decontaminated. Decontamination shall be in accordance with the applicable Federal, State, and local laws and regulations and provisions of Section 02 51 00 - Building Decontamination or Section 02 51 29 Ash / Dust/ Debris Removal and Material Decontamination, as applicable. Areas to be decontaminated include, but are not limited to, equipment, equipment structures, elevator shafts/pits, floors and walls.

3.05 SITE WORK:

- A. Site work shall include all pavement removal, excavation, trench work, backfill, dewatering, demolition, and restoration that is required for the complete removal of the lifts, elevators, and associated hydraulic and heating oil systems. The Contractor shall remove, segregate, and containerize all surplus excavation material and construction debris, hoists, piping, heaters, and any associated hydraulic and heating oil.

3.06 REMOVAL:

- A. The Contractor shall remove all hydraulic and heating oil components (i.e., hoists, heaters, tanks, and above ground piping) from the Site.

3.07 EXCAVATION FOR REMOVAL:

- A. The Contractor shall saw cut to full depth the existing paved areas to complete the elevator and lift removal. All excavations shall be made to allow safe access to complete all phases of the work. The Contractor shall use methods and equipment for pavement removal that shall not damage the existing lifts, piping, and conduit prior to their removal from the excavation. The Contractor shall be responsible for removing the lifts in accordance with the following guidelines:
1. Secure the work area with barricade tape and warning signs supported with fencing and/or posts as necessary to preclude entry by unauthorized individuals. Barricades shall be either lighted or reflectorized to provide visibility during darkness.
 2. Establish an exclusion zone (no smoking within).
 3. Excavate or uncover the hoist and any underground hydraulic tanks and piping.
 4. Remove all liquids from the hoist and associated piping, tanks, and pits.
 5. Excavate around the hoist to prepare for removal.
 6. Equipment with sufficient lifting capacity shall be used to lift the hoist from the excavation, along with any associated hydraulic piping and tanks.
- B. Any hoist removed from the excavation zone shall be cleaned on-site the day of the removal.

3.08 CONTAMINATED SOIL AND LIQUIDS:

- A. The Contractor may encounter contaminated soil and/or liquids during the removal of the heating oil or hydraulic systems. Should impacted materials be identified by visual, olfactory, field screening, or analytical test results, the Contractor shall notify the Commissioner and provide for the proper handling and disposal of the impacted materials.

3.09 BACKFILL:

- A. Backfilling materials and procedures shall comply with appropriate standards and specification in Section 31 23 23.13 – Backfill Material Environmental Testing Requirements and Section 31 23 00 - Backfill of Building and Utility Removal Areas.

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 41 19.16

INTERIOR DEMOLITION

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. Contractor shall execute interior demolition and dismantlement to enable asbestos abatement and decontamination required by the Contract Documents or as instructed by the Commissioner. The Contractor shall furnish all labor, equipment, and materials required for the following activities:
1. Demolition/Dismantlement and disposal of furnaces, boilers and flues.
 2. Demolition/Dismantlement and disposal of all structures, equipment and accessories within the project work area limits unless specified otherwise.
 3. Demolition and disposal of site improvements not shown on drawings.
 4. Disconnecting, cleaning, capping or sealing, and abandoning site utilities within the work area limits.
- B. Unless decontaminated to the contract and regulatory required limits, all materials removed from within the Sealed Incinerator Rooms work area must be handled and disposed of as asbestos and metals contaminated wastes.
- C. All demolition and dismantlement work within the Sealed Incinerator Rooms work area shall be conducted in conjunction with asbestos abatement work under full containment and negative pressure conditions.

1.02 APPLICABLE REFERENCES:

- A. The regulations of the Agencies listed below (but not limited to) and the Rules of the City of New York (RCNY) are a part of this specification. The requirements are referenced in the text by basic designation only and shall be the latest version published. In the case of conflict between the referenced documents and the following text, the stricter requirements shall apply.
1. 1.02.1 New York City Department of Environmental Protection (NYCDEP) Requirements.
 2. 1.02.2 New York City Building Code, Fire Code and Electrical Code Requirements.
 3. 1.02.3 New York City Department of Sanitation and Transportation Requirements
 4. 1.02.4 OSHA Requirements.
 5. 1.02.5 Any other applicable Federal, State, City or Utility company Regulations.

1.03 RELATED WORK:

- A. Section. 02 41 19.19 ELECTRICAL SYSTEM DISMANTLEMENT DURING ABATEMENT PHASE
- B. Section 02 51 00 BUILDING DECONTAMINATION
- C. Section. 02 51 29 ASH / DUST / DEBRIS REMOVAL AND MATERIAL DECONTAMINATION
- D. Section 02 51 29.13 SEWER AND UTILITY CLEANOUT

E. Section 02 82 13 ASBESTOS ABATEMENT

1.04 PERMIT AND LICENSE REQUIREMENTS:

- A. Prior to the commencement of work under this Contract, any permits or licenses required to perform the demolition work, disconnection and plugging of utilities shall be obtained by the Contractor at the Contractor's own cost and expense. Determining license and permit requirements shall be the responsibility of the Contractor. The Contractor must act sufficiently ahead of time in order to receive the permits in time. No delay claim or extension of time shall be entertained due to time lapse in this regard.

1.05 SUBMITTALS:

- A. Submit each item in this Article according to the Conditions of the Contract and the Specific Provisions Sections for approval by the Commissioner. Please refer to the General Conditions for standard submittal procedures:
1. Electrical Systems Work Plan (see Section 02 41 19.19).
 2. Proposed dust-control measures (Dust Control Plan).
 3. Proposed noise-control measures (Noise Control Plan).
 4. Schedule of demolition activities including the following:
 - a) Detailed sequence of demolition and removal work, with starting and ending dates for each activity.
 - b) Dates for shutoff, capping, and continuation of utility services.
 5. Detailed Demolition Plan outlining proposed means, methods and sequence. This plan shall include all appropriate information, data, and calculations (i.e., shielding requirements, loading capacities for floors, etc.) to support the proposed demolition method.
 6. Inventory of items to be removed and salvaged.
 7. Inventory of items to be removed by the City of New York.
 8. Photographs or videotape, sufficiently detailed, of existing conditions of the work area prior to the start of work.
 9. Record Drawings at Project Closeout - Identify and accurately locate capped utilities and other subsurface structural, electrical, or mechanical conditions
 10. Landfill or disposal facility records for record purposes indicating receipt and acceptance of hazardous wastes by the facility licensed to accept hazardous wastes (see other specification sections for details).

1.06 DEFINITIONS:

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the City of New York's property.
- B. Existing to Remain: Protect construction indicated to remain against damage and soiling during demolition. When permitted by the Commissioner, items may be removed to a

suitable, protected storage location during demolition and then cleaned and reinstalled to their original locations.

1.07 MATERIALS OWNERSHIP:

- A. Except for items or materials indicated to be reused, salvaged, or otherwise indicted to remain the City of New York's property, demolished material shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option. Carefully remove and salvage each item or object indicated to be reused or salvaged in a manner to prevent damage and deliver promptly to the City of New York.

1.08 QUALITY ASSURANCE:

- A. Demolition Firm Qualifications - Engage an experienced firm that has three years experience and has successfully completed demolition work projects similar in scope to this Project.
- B. Regulatory Requirements - Comply with all governing notification regulations before starting demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Pre-demolition Conference - Conduct conference at Project site.

1.09 PROJECT CONDITIONS:

A. Pre-work Conditions

- 1. A site investigation report which details the results of environmental sampling conducted at the facility is available through the City of New York. The site investigation report is provided for information and is not to be considered as part of the Contract Specifications.
- 2. The Contractor is responsible for the demolition/dismantlement and removal of furnaces, boilers, flues, ducts and all other structures and equipment within the work area limits shown on the Contract Documents (unless specified otherwise). The Contract Drawings show the major structures and equipment within the project work limits, but do not show all features requiring demolition and removal. It is the Contractor's responsibility to inspect and evaluate existing work area conditions prior to bidding the project.

B. Owner (City of New York) Responsibility

- 1. The City of New York assumes no responsibility for actual condition of the structures and equipment to be demolished.
- 2. Conditions existing at time of inspection for bidding purposes shall be maintained by the City of New York as far as practical.

C. Asbestos and Metals Contaminated Wastes

- A. Asbestos and metals contaminated wastes are present throughout the work area and within

the furnaces/boilers to be demolished. The Work Area must be decontaminated and abated as specified in the Contract Documents. A report on the presence of asbestos and metals wastes is on file for review and use. Examine the report to become aware of locations where asbestos and metals wastes are present.

1. Asbestos abatement and metals wastes clean up requirements are specified elsewhere in the Contract Documents.
 2. Do not disturb any material suspected of containing asbestos or metals wastes except under the procedures specified elsewhere in the Contract Documents.
- D. Storage or Sale of Removed Items or Materials - Storage or sale of removed items or materials on-site shall not be permitted.

1.10 SCHEDULING:

- A. Arrange building decontamination and asbestos abatement schedule so as not to interfere with City of New York's on-site operations. The Contractor shall submit a sequence of the interior demolition for Commissioner's approval.
- B. Schedule Submittal and Approval Requirements
1. Within 10 calendar days of the Notice to Proceed of contract, the Contractor shall prepare and submit to the Commissioner a progress schedule which meets all the requirements of this section.
 2. The Commissioner shall, within 7 calendar days of receiving the schedule, either approve it as submitted or return it to the Contractor for revision and re-submission. This process shall continue until an approved schedule is in place.
 3. No acceptance, review or approval or any other action under this section shall limit, affect or impair the Contractor's obligation to perform all the work defined in the Contract Documents by the times stated therein.
- C. Schedule Requirements
1. All schedule submittals to the Commissioner shall be in the form of a logic diagram or a time-scaled logic bar chart. The following minimum information must be included for each schedule activity; activity number, activity description, activity duration, responsible contractor, early start and finish dates. All logical relationships between activities must be shown.
 2. Schedule activities should be of sufficient detail so that no activity has a duration greater than five working days, with the exception of procurement activities. The Contractor must identify, in supporting documentation, the number of work days per week and shift per day that he intends to perform the work. All planned holidays should be indicated.

3. Schedule activities should include, but are not limited to: NYCDEP asbestos variance requests and approvals, shop drawings and shop drawing approval time, catalog cuts, samples, permits, inspection points, surveys, temporary facilities and utilities.
4. It shall be the Contractor's responsibility to ensure that all of his work is described by the schedule and that the schedule correctly represents the sequence, means, methods, techniques and procedures by which he plans to do the work.

D. Schedule Review and Updating

1. The schedule shall be reviewed and the status of each activity determined at progress meetings with the Commissioner.
2. If the latest completion time for any milestone activity does not meet the time allowed by the Contract, the sequence of activities and/or performance of activities shall be revised by the Contractor through concurrent operations, additional manpower, additional shifts, overtime, etc., until the schedule produced indicates that all Contract milestones shall be met. Should such expediting procedures be necessary, no additional cost shall be allowed the Contractor for: overtime, additional manpower, equipment, additional shifts, etc., except as provided for elsewhere in the Contract Documents. All modifications to the schedule must be submitted to and approved by the Commissioner.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 UTILITY SERVICES:

A. Existing Utilities

1. Maintain existing utilities if required to remain in service for other portions of the building and protect them against damage during abatement or demolition operations.
2. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by the City of New York if shutdown of service is required during changeover.

B. Electrical Distribution System Dismantlement/Protection

1. Furnish all labor, materials, tools and equipment required to evaluate and manage the electrical distribution system so that demolition and asbestos abatement can proceed in the work area without interruption of electrical service to other occupied areas of the facility.

C. Utility Shut Off Requirements

1. Locate, identify, disconnect, and seal or cap off utility services serving structures to be

demolished. Existing service connections to Gas, Electricity, Water, Sewer and Telephone are shown on the plans based on known information. It is the Contractor's responsibility to verify and identify all service connections that need to be cleaned, disconnected, plugged, sealed or bulk-headed as per the requirements of utility companies or City agencies.

2. Obtain the City of New York's written permission for shutting off any service or services. Obtain all necessary permits. Employ only those personnel who has NYC license in the respective trade.
3. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.02 EXAMINATION:

- A. Verify that utilities have been disconnected and capped.
- B. Provide documentation all electrical distribution lines have been de-energized within the project work areas.
- C. Provide documentation that all asbestos abatement and building decontamination tasks have been completed.
- D. Survey existing conditions and correlate with requirements indicated to determine extent of demolition required.
- E. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- F. Survey the condition of the building to determine whether removing any element might result in a structural deficiency or unplanned collapse of any portion of the structure.
- G. Perform surveys as the Work progresses to detect hazards resulting from demolition activities.

3.03 PREPARATION:

- A. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammable, or other dangerous materials before proceeding with demolition operations. Remove and decontaminate all building equipment and materials as specified in the contract Drawings and Specific Provisions and the Technical Specifications of this document.
- B. Employ a certified, licensed exterminator to treat building and to control rodents and vermin before and during demolition operations.
- C. Conduct demolition operations and remove debris to ensure minimum interference with

roads, street, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from the City of New York and authorities having jurisdiction.
 2. Provide Maintenance and Protection of Traffic for waste removal activities as per plan and/or as directed by Commissioner.
- D. Conduct demolition operations in such a manner to prevent injury to workers/building occupants and damage to adjacent rooms within the facility. Ensure safe passage of workers within the demolition area.
1. Erect temporary protection, such as walks, railings, canopies, covered passageways for workers.
 2. Protect any site improvements, appurtenances, and features that are designated by the City of New York to remain.
- E. Provide and maintain shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of equipment and structures to be demolished. Strengthen or add new supports when required during progress of demolition.

3.04 BURNING AND WELDING:

- A. The following guidelines have been developed to insure the safety of personnel and property from fire. Should hot work involve lead containing coatings, comply with 29 CFR 1926.62. The following safety guidelines must be followed:
1. If fire watch is required, the Contractor shall provide that individual.
 2. Contractor must provide their own portable fire extinguisher for standby at hot work operations.
 3. Compressed gas cylinders must be transported in wheeled carts and bottles secured in the carts. Cylinders must not be stored in buildings.
 4. Cylinders are to be capped when not in use.
 5. Back flow check valves must be installed at torch handles and hose to gauge connection point.
 6. Welding screens must be placed to prevent exposing adjacent workers to arc.
 7. Areas may require barricading to prevent personnel from exposure to sparks or slag.

8. Appropriate eye protection must be worn for cutting or welding operations.
9. All combustibles must be stored at least 35 feet from hot work area or covered by fire blanket. (Fire blankets cannot be asbestos material.)
10. Area should be under surveillance for 30 minutes after the job is completed, or longer if so determined by Commissioner.
11. Any fires must be reported immediately to the Commissioner on-site representative and to the City of New York. The Contractor must have a phone available in the work area to call 911 for City fire fighting assistance if needed.
12. Compressed gas cylinders shall be properly stored in accordance with RCNY Title 3.

3.05 POLLUTION/DUST CONTROLS:

- A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. All work within the Sealed Incinerator Rooms work area must be performed under negative pressure and full containment as specified in Section 02 82 13. Return adjacent areas to condition existing before start of demolition.
 1. Comply with governing environmental protection regulations.
 2. Do not create hazardous or objectionable conditions, such as ice, flooding, and pollution.
 3. Conduct air monitoring of work areas and areas adjacent to work area as specified elsewhere in the Contract Documents.
- B. Remove and transport debris in a manner that shall prevent spillage on adjacent surfaces and areas. Remove debris from elevated portions of building by chute, hoist, or other device that shall convey debris to grade level.
- C. Fugitive Dust Emissions - This project shall require a fugitive dust plan and asbestos/metals monitoring plan as specified elsewhere in the Contract Documents. All work shall be performed under full containment and negative pressure to prevent the release of fugitive dust emissions. At no time shall a fugitive dust plume or cloud be allowed to escape from the project work area. If a complaint is received by any member of the project team concerning fugitive dust emissions, or air monitoring indicates a release has occurred, the process shall be halted immediately until the issue is investigated and a satisfactory resolution can be implemented.
- D. Material Transfer - The transfer materials from the point of decontamination to the debris staging area shall be orderly with the drop distance to the pile not to exceed six feet unless agreed to be the Commissioner. Multiple handling of the debris materials

shall be minimized.

- E. Debris Pile Minimization - The quantity of debris within the work area should be kept to a minimum.
- F. Truck Tarping - All trucks transporting waste or debris shall be completely covered with tarpaulins. All trucks transporting hazardous or contaminated debris shall comply with all applicable waste transport regulations.
- G. Truck Washing - To prevent the migration of any material or residue to the surrounding roadways, the wheels and body of each truck shall be cleaned (if directed by the Commissioner) to remove any material or residue prior to leaving the site.
- H. Truck Emptying - Residue shall be cleaned from the inside of the truck after emptying. If residue has not been completely removed after emptying the truck material, tarpaulins shall be placed in the bed of the truck to cover the remaining material.
- I. Truck Exhaust - The engine exhaust gases that are generated by the equipment used to load/unload and transport materials shall be directed upward whenever possible.
- J. Debris Drop Distance - The drop distance of the material onto the pile, truck, process, etc., shall not exceed six (6) feet.
- K. Container Leakage - All equipment transporting material shall be maintained in such a way to prevent leakage and spillage.

3.06 DEMOLITION:

- A. Demolition of Equipment and Structures - Demolish all equipment and interior structures (i.e., catwalks, steel stairs, etc.) within work area limits completely and remove from the site. Use methods required to complete Work within limitations of governing regulations and as follows:
 - 1. Locate demolition equipment throughout the building and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 2. Dispose of demolished items and materials promptly. All equipment or structures which have not been decontaminated in accordance with the Contract Documents shall be disposed of as RCRA hazardous metals and asbestos waste. On-site storage or sale of removed items is prohibited.
 - 3. Demolish concrete and masonry in small sections.
- B. Damages - Promptly repair damages to adjacent portions of the facility caused by demolition operations.

3.07 RIGGING:

- A. All rigging equipment and hardware (chainfalls, slidings, etc.) shall be thoroughly inspected prior to the initiation of rigging activities. The inspection shall be documented in writing (listing equipment identity, serial number, etc.) or by some visual method of identification (inspection tag) on the actual piece of equipment initially and at least monthly thereafter.
- B. The Contractor shall ensure that competent riggers are used for rigging tasks. The Contractor shall document, in writing, that the persons are competent and shall provide a copy of the written training material, test results, and other associated support material. Furthermore, the Contractor shall document, in writing, that crane operators are qualified per the requirements of American National Standards Institute (ANSI) B-30.5. The Contractor shall provide a copy of the Contractor's crane operator training program, test results, and other associated material.
- C. All mobile equipment shall be inspected by the Contractor's mechanics. The Contractor shall provide proof of annual crane inspection, by an agency recognized by the U.S. Dept. of Labor.
- D. Existing lifting lugs, I-bolts, etc. on structures and other equipment are not permitted to be used by the Contractor for rigging. Overhead supports, and I-beams are to be certified by the Contractor prior to use for rigging. The Contractor shall provide written plans on rigging methods to the Commissioner prior to the initiation of sheet rigging activities for review and acceptance. Rigging methods shall not include field-modified tools or use of tools outside of tool manufacturer's written consent. All structural steel, piping, and equipment, shall be rigged with at least two points of rigging - no single point picks shall be permitted without the written consent of the Commissioner. All loads must be controlled - no loads shall be permitted to be dropped from elevated locations.

3.08 DISPOSAL OF DEMOLISHED MATERIALS:

- A. General - Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning - Do not burn demolished materials.
- C. Disposal - Transport demolished materials off of City of New York property and legally dispose of them.

3.09 EXPLOSIVES:

- A. The use of explosives shall not be permitted.

END OF SECTION

SECTION 02 41 19.19

ELECTRICAL SYSTEM DISMANTLEMENT DURING ABATEMENT PHASE

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. Maintain or reroute existing electrical lines or provide temporary electrical lines for continuing operations of the Marine Transfer Station, M-2 Garage, M-5 Garage, and Salt Shed during asbestos abatement and building decontamination to support continuing City of New York operations such that the electrical power requirements for City of New York operations are met at these facilities.
- B. Sever all existing electrical power supply to the Sealed Incinerator Rooms of the Destructor Building prior to the initiation of asbestos abatement and building decontamination.
- C. Provide temporary power for asbestos abatement and building decontamination.
- D. The Contractor shall furnish all labor, materials, tools and equipment required to evaluate, de-energize, and rearrange the electrical system. The Contractor shall also evaluate de-energize and rearrange any electrical distribution lines present within the work area limits so that asbestos abatement, decontamination, and demolition activities can proceed without interruption of electrical service to the other portions of the facility that will be active during abatement and decontamination.
- E. The Contractor's evaluation of the present electrical distribution system must be conducted by a qualified, licensed electrician or professional engineer. The Contractor's electrician/engineer must also meet with representatives from the City of New York DSNY Bureau of Building Maintenance to discuss options for de-energizing and rerouting of electrical lines. The Contractor shall use the evaluation results to develop an electrical system Work Plan for isolating, de-energizing and rerouting lines (while maintaining electrical service for the remainder of the facility) so that the asbestos abatement/demolition/environmental work can be completed. The Contractor shall submit the plan for the Commissioner's approval prior to starting work. The plan must include provisions for worker safety (lockout, tag-out, and testing procedures) and must demonstrate that the proposed work shall adequately prepare the entire work area for asbestos abatement, demolition and environmental work.
- F. All costs associated with maintaining, rerouting, severing existing power supply and installing of temporary power shall be included in the Contractor's lump sum bid. The utility and material cost of power for Contractor's equipment and lighting for all phases

of the Work, whether the power source is permanent or temporary, shall be borne by the Contractor and shall be included in the Contractor's lump sum bid price. The utility cost of power for the City of New York's continuing operations shall be the responsibility of the City of New York and shall not be included in the Contractor's lump sum bid price.

1.02 RELATED WORK:

- A. SECTION 02 51 00: BUILDING DECONTAMINATION
- B. SECTION 02 51 29: ASH/DUST/DEBRIS REMOVAL AND MATERIAL DECONTAMINATION
- C. SECTION 02 82 13: ASBESTOS ABATEMENT

1.03 COORDINATION WITH UTILITIES:

- A. The Contractor shall comply with all power company requirements.
- B. The Contractor shall comply with the rules, regulations, codes, and standards of New York City.
- C. The Contractor shall coordinate with the utility company to meter power supplied for Contractor's needs.

1.04 CODES LISTINGS AND STANDARDS:

- A. Electrical Codes: All electrical work covered by the Contract Documents shall conform to the requirements of the New York City Electrical Code and National Electrical Code.
- B. Listings: All equipment and materials for which Underwriters' Laboratories, Inc. provides product listing service shall be Underwriters' Laboratories approved and bear the UL label.
- C. Standards: Equipment and materials, wherever applicable, shall conform to local codes and the following standards and regulations:
 - 1. IES Illuminating Engineering Society
 - 2. NEMA National Electrical Manufacturers Association
 - 3. IEEE Institute of Electrical and Electronic Engineers
 - 4. ANSI American National Standards Institute
 - 5. ICEA Insulated Cable Engineers Association
 - 6. OSHA Occupational Safety & Health Administration

1.05 SUBMITTALS:

- A. The Contractor shall submit for approval a Work Plan detailing the required electrical work and methods.
- B. Manufacturer's Data: If new materials are required, submittals for each manufactured item shall be the manufacturer's descriptive literature, equipment drawings, diagrams, performance and characteristic curves, and catalog cuts. Each submittal shall include

the manufacturer's name, trade name, catalog model or number, nameplate data, size, layout dimensions, capacity, specification reference, applicable federal and industry specification references, and all other information necessary to establish Contract compliance.

1.06 GENERAL REQUIREMENTS:

- A. All electrical work shall be in accordance with requirements of the City of New York.
- B. The Contractor shall furnish and install all equipment and materials required for the Contractor's temporary electrical lighting and power use.
- C. The Contractor shall furnish and install all equipment and materials required to rearrange the existing electrical distribution system while maintaining electrical service to the facility. The rearrangement of circuits must be performed as a permanent installation (unless directed otherwise by the Commissioner) conforming to all applicable codes.
- D. The electrical installations, equipment, materials, and methods of construction shall be in accordance with the provisions of the Electrical Code of the City of New York.
- E. Electrical materials, devices, components, and/or assemblies shall be new and listed by the Underwriters' Laboratories, Inc. (UL) wherever standards have been established by the agency. In lieu of listing by the UL, consideration shall be given to certified test reports of a similar recognized independent testing laboratory.
- F. All electrical work performed within the abatement/cleanup limits to isolate/de-energize or to install temporary power must be performed by personnel with all appropriate licenses and certifications (i.e., OSHA 40 hour Hazardous Worker Training, NYSDOL asbestos worker licenses, and electrician/electrical contractor licenses).

PART 2 - PRODUCTS

2.01 GENERAL:

- A. The Contractor shall provide new or used materials and equipment that are undamaged and in serviceable condition. Provide only materials and equipment that are recognized as suitable for the intended use, in compliance with applicable standards and specifications.
- B. The Contractor shall deliver all materials in the original packages, containers or bundles bearing the name of the manufacturer and the brand name, where applicable.
- C. Damaged or deteriorating used materials shall not be used and shall be removed from the Work Site and disposed of properly.

2.02 MATERIALS:

- A. Temporary Electrical Panels - Provide temporary electrical panels (as required) sized and equipped to accommodate all electrical equipment and lighting required by the work. Protect with circuit breaker or fused disconnect.
- B. Temporary Wiring - Temporary wiring in the Work Area shall be located overhead in view for surveillance. Do not wire temporary lighting with plain, exposed (insulated) electrical conductors. Provide liquid tight enclosures or boxes for wiring devices.
- C. Permanent Electrical Panels - Provide permanent electrical panels (as required) sized and equipped to rearrange the electrical distribution system to maintain electric service to the facility.
- D. Permanent Wiring - Permanent wiring used to rearrange the electrical distribution system shall meet all applicable codes.
- E. Ground Fault Protection Devices - Equip all circuits for any purpose entering Work Area with ground fault circuit interrupters (GFCI). Locate GFCI's exterior to Work Area so that all circuits are protected prior to entry to Work Area. Provide circuit breaker type ground fault circuit interrupters (GFCI) equipped with test button and reset switch for all circuits to be used for any purpose in Work Area, decontamination units, exterior, or as otherwise required by national electrical code, OSHA, or other authority. Locate in panel exterior to Work Area.
- F. Electrical Power Cords - Use only grounded extension cords; use *hard-service* cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electrical cords if single lengths shall not reach areas of work. Provide sufficient power cords to complete the Work and for the Commissioner to use as required for the performance of air monitoring and clearance testing. All cords must be in good condition and free from damage or makeshift splices.
- G. Temporary Lamps and Light Fixtures - Provide general service incandescent lamps or fluorescent lamps of wattage indicated or required for adequate illumination as required by the work or this section. Protect lamps with guard cages or tempered glass enclosures, where fixtures are exposed to breakage by construction operations.

PART 3 - EXECUTION

1.01 LOCKOUT-TAGOUT MINIMUM REQUIREMENTS:

- A. Lockout/energy control shall meet all applicable OSHA requirements. Contractor shall coordinate lockout of all existing power to the Work Area with the Commissioner and the City of New York DSNY Bureau of Building Maintenance. Unless specifically noted otherwise existing power and lighting circuits to the Work Area are not to be used. All power and lighting to the Work Area and Decontamination facilities are to be provided from temporary electrical panel described below.

1. Lockout power to Work Area by switching off all breakers serving power or lighting circuits in Work Area. Label breakers with a danger tag with notation *DANGER Circuit Being Worked On*. Lock panel and have all keys under control of Contractors Superintendent.
2. Lockout power to circuits running through Work Area by switching off all breakers serving these circuits. Label breakers with a danger tag with notation *DANGER Circuit Being Worked On*. Sign and date danger tag. Lock panel and supply keys to the Contractor's Superintendent.
3. Detailed lockout-tag-out procedures to be followed by the Contractor or electrical subcontractor shall be provided in the Contractors electrical systems Work Plan.

3.02 ELECTRICAL SYSTEM DE-ENERGIZING:

- A. The Contractor shall submit a detailed Work Plan which outlines all procedures, methods and safety requirements which shall be implemented for the de-energizing and rearranging of Work Area electrical equipment, conduit, cables and conductors. The work plan shall address electrical hazards which may be encountered during project electrical system activities including, but not limited to, the following:
 1. Backfeeds in electrical equipment
 2. Induced voltage in cables
 3. Residual voltage in cables
 4. Contacting energized conductors or parts
 5. Vibration of operating relays causing trips
 6. Incorrect labeling
- B. The following minimum requirements shall be addressed in the Work Plan for the de-energizing and rearranging of cable or conductors in conduit.
 1. If de-energizing and rearrangement of cable or conductors from conduit involves cutting some of the enclosed conductors in a conduit while some conductors are intended to remain, all conductors must be de-energized, locked, tagged, tried, and tested.
 2. Cable or conductors intended to be de-energized and rearranged from conduit shall be electrically isolated per lockout-tag-out procedures.
 3. Conductors shall be disconnected on both ends.

4. Conductors shall be tested and absence of voltage verified at all access points (pull boxes, junction boxes, conduits, etc.) with a single function test device prior to performing any work associated with the de-energizing or rearrangement of the electrical system. *NOTE: Proper operation of any test device must be verified on known source, both before and after the tests. NOTE: Non-contact test devices have limitations, such as not detecting DC voltage or not detecting AC voltage through a metal sheath. The user shall be knowledgeable of those limitations.*
5. After absence of voltage has been verified, starting from the voltage supply end, the conductors shall be cut.
6. The above procedures shall be repeated until all conductors are de-energized.

3.03 ELECTRICAL REARRANGING:

- A. The Contractors Work Plan shall address how any lines within the Work Area which feed other parts of the facility shall be rerouted or rearranged without the interruption of electrical service to these areas. The Contractor shall evaluate all panels, equipment and lines prior to performing any electrical work. Following this evaluation the Contractor shall provide the Commissioner with his plan to de-energize and rearrange the electrical system. This rearrangement plan must ensure that work shall comply with all applicable codes.

3.04 ELECTRICAL HAZARD TRAINING AND PROTECTIVE EQUIPMENT:

- A. The Contractors Work Plan shall address the minimum planning, personnel protective equipment, training and procedures to be implemented during the de-energizing/rearrangement and temporary electrical service work.

3.05 TEMPORARY POWER:

- A. The Contractors Work Plan shall provide and ensure safe installation of temporary power sources for equipment and lighting, giving special attention to areas of high humidity and/or sprayed water. Installation must comply with all applicable codes. Additional temporary power requirements are detailed in Section 02 82 13. All power shall be brought into the work areas through ground fault circuit interrupters positioned at the source. The Contractor shall install sufficient power supply for all phases of work, including the negative air equipment, tools, lighting and power for the City of New York's Environmental Consultant's air monitoring equipment.

END OF SECTION

SECTION 02 51 00

BUILDING DECONTAMINATION

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. This section applies to decontamination of garages and all other buildings and building areas other than the Sealed Incinerator Rooms of the Destructor Building. A specification for decontamination of the Sealed Incinerator Rooms is provided in Section 02 51 29 – Ash / Dust / Debris Removal and Material Decontamination.
- B. This section provides general methodologies and sequence which may be implemented during the decontamination of the facility. One or more of the decontamination methods described or referred to in this section are to be utilized by the Contractor to perform the decontamination activities as identified in this specification. Contractor is responsible to furnish all equipment, labor, materials, and supplies necessary to complete work. The Contractor shall provide all Personal Protective Equipment (PPE) required to complete the work.
- C. Surfaces to be cleaned primarily include oil-stained concrete and floors, but also may include and are not limited to PCB-stained concrete/walls/equipment and brick surfaces. Items to be disposed of as hazardous waste may include, but are not limited to, refractory brick, asbestos containing material, debris, hazardous material-bearing equipment, non-decontaminated equipment and apparatus, debris, decontamination liquids and tools, and PPE. Prior to starting work Contractor shall submit for Commissioner's approval, a project work plan which details Contractor's proposed sequence and methods for completing all cleaning and materials disposal.
- D. All decontamination work shall be conducted in accordance with all NYSDOL requirements and variances in asbestos contaminated areas. The Contractor will be required to perform all decontamination activities in asbestos contaminated areas in conjunction with asbestos abatement work under full containment and negative pressure conditions.
- E. Waste Classification and Handling
 - 1. Areas to be decontaminated are classified with respect to the waste material that shall be removed, including, but not limited to, dirt, debris, grime, mechanical systems, industrial equipment, interior building surfaces. The hazardous determination of the specified materials has been evaluated through representative surface sampling and laboratory analysis for specific constituents of concern.
 - 2. Conduct laboratory sampling to classify wastes (including decontamination fluids and equipment) as required to ship the waste off-site in compliance with the manifesting

and shipping requirements specified in 6 NYCRR Part 372.

3. Dispose of waste in an approved waste disposal facility. Prior to disposal, the Commissioner shall review the certifications of any facility used for disposal of waste.
 4. Provide copies of all fully completed manifests, shipping papers, and disposal records, including weight receipts, to the Commissioner upon authorization and return from the landfill.
- F. Perform the Building Decontamination in the following sequence:
1. Mobilize, establish, and construct support facilities (i.e., construction trailer) as required by the General Conditions. Refer to Section 02 82 13 of this specification for required site preparation. Install any required scaffolding and lifting apparatus on exterior of building to insure appropriate building access to all stories.
 2. Where required, lockout and tag-out of mechanical and electrical energy according to applicable regulations (see Section 02 41 19.19). Coordinate any lockout/tag-out procedures with the Commissioner.
 - a. Electrical lockout/tag outs shall be performed by a certified electrician.
 - b. Provide temporary lighting for clear visibility throughout the work area.
 - c. Electrical powered equipment used within the work area shall be individually protected by in-line ground fault circuit interrupters (GFIs).
 - d. In areas requiring power washing, all electricity shall be brought in from outside the work area.
 - e. The building shall be unoccupied and non-energized.
 3. Establish decontamination units in areas approved by the Commissioner. Coordinate the timing and exact placement of the decontamination areas and units with the Commissioner.
 4. Clean floor drains and sumps utilizing a combination of HEPA vacuuming and/or wet-wiping procedures.
 5. Perform asbestos abatement, hazardous material removal and building cleaning in accordance with the Contract Documents.
 6. Decontaminate interior building surfaces as specified in this Section.
 7. Remove all non-contaminated solid waste from building areas outside of building decontamination limits specified in the contract drawings and dispose of as solid

waste.

8. Conduct a visual inspection of the cleaned areas in the presence of the Commissioner's Onsite Representative and collect random wipe samples from the decontaminated areas:
 - a. Provide access for the Commissioner to all cleaned surfaces.
 - b. An area is considered clean when laboratory analysis of clearance/confirmation samples demonstrates that the associated area contains less than the levels of contaminants specified in 1.02 and 1.03 of this Section.
 - c. Re-clean areas as directed, where laboratory analysis demonstrated that areas exceed specified levels.
 - d. After notification by the Commissioner that the clearance/confirmation wipe sample has been determined clean via laboratory analysis, remove physical barriers, provided that these actions shall not subject the area to contamination from work in other areas.
9. Refer to Section 02 41 19.16 Interior Demolition.
10. Characterize, pack, transport and dispose of all building decontamination wastes including, but not limited to, contaminated ash, debris, dust, dirt, grime, painted surfaces, lead paint residue/chips, wash water, non-decontaminated equipment and apparatus and used decontamination equipment in accordance with all applicable Federal, State, and Local regulations. Applicable regulations include, but are not limited to, the following:
 - a. 29 CFR 1910
 - b. 29 CFR 1926
 - c. 40 CFR 260-263
 - d. 49 CFR 106, 107, 171-179
 - e. 6 NYCRR 360, 364, 372
11. Ensure the safe and appropriate transport of wash water from the building to the liquid disposal containers.
12. No unauthorized discharges to city sanitary and/or storm sewers or other uncontrolled discharges shall occur. Decontamination water shall be treated and disposed of in accordance with Sections 02 86 00 – Removal of Drummed Waste and Decontamination Water and 02 71 00 – Water Treatment System.

1.02 EQUIPMENT DECONTAMINATION:

- A. Non-fixed and semi-fixed equipment and apparatus which requires decontamination shall be moved to the equipment decontamination area and shall be decontaminated using power washing, scrubbing, rinsing, and drying or a combination of methods.
- B. Water-based surfactants are to be approved by the Commissioner prior to use.
- C. For non-porous equipment containing PCB oils/fluids, collect representative wipe samples from the PCB oil stained surfaces and apparatus after the items have been decontaminated and have dried.
 - 1. Collect a minimum of 5 wipe samples for PCB analysis (USEPA Method 8080) using laboratory supplied sterile gauze pads that have been soaked in hexane. Using firm strokes with even hard pressure and a dedicated template, wipe a 100 cm² area of an individual piece of equipment or non-fixed surfaces.
 - 2. Place collected samples in laboratory provided/cleaned glass jars and label with the appropriate sample information (e.g., location, time, date, etc.).
 - 3. Collect one split samples among the 5 collected samples and submit to the Commissioner for laboratory analysis using the Commissioner's laboratory.
 - 4. Keep collected samples cool (approximately 4°C).
 - 5. Laboratory analyses shall be conducted according to NYSDEC's ASP protocol. Deliverables shall be ASP Category A. Faxed results are to be provided to the Commissioner within 48 hours of sample collection. ASP deliverables are to be provided to the Commissioner within 30 days of sample collection. Laboratory shall be NYSDOH ELAP certified for the parameter being analyzed.
- G. Non-fixed or semi-fixed equipment and apparatus shall be considered decontaminated when laboratory analysis of representative wipe samples indicate that these materials contain less than 10 µg/100 cm² for total PCBs.
- H. For equipment containing petroleum oils or residues based on visual inspection, decontaminate the surface until the oil or residue is removed.
- E. Contractor is responsible for retesting where above limits are not met for decontamination.
- F. Coordinate the collection of wipe samples and visual observations with Commissioner.
- G. Dispose of non-contaminated non-fixed and semi-fixed pieces of equipment and apparatuses as scrap.

1.03 BUILDING DECONTAMINATION:

- A. Decontaminate, as required, the building interior and fixed objects within the building using HEPA vacuuming, power washing, mopping, squeegeeing, or wet wiping, or a combination of methods specified in 1.04 of this Section.
 - 1. Remove chipped and flaking paints from interior walls, floors, and fixed objects using power washing, manual scraping and HEPA vacuuming, or a combination of methods.
 - 2. Do not allow wash water to puddle or stand.
- B. Water-based surfactants are to be approved by the Commissioner prior to use.
- C. Decontaminate all guano-containing surfaces using the procedure in 1.04 of this Section.
- D. Asbestos abatement shall be performed as specified in Section 02 82 13.
- E. For surfaces and floors containing petroleum oils or residues based on visual inspection, decontaminate the surface until the oil or residue is removed. Following decontamination, surfaces and floors will be inspected and decontamination approved by the Commissioner.
- F. For non-porous building surfaces coated with PCB oils/fluids, collect representative wipe samples as directed by the Commissioner from the surfaces after the areas have been decontaminated and have dried.
 - 1. Collect a minimum of 5 wipe samples for PCB analysis (USEPA Method 8080) using laboratory supplied sterile gauze pads that have been soaked in hexane. Using firm strokes with even hand pressure and dedicated template, wipe an area of 100 cm².
 - 2. Place collected samples in laboratory provided/cleaned glass jars and labeled with the appropriate sample information.
 - 3. Collect one of the 5 collected samples as split samples and submit to the Commissioner for laboratory analysis using the Commissioner's laboratory.
 - 4. Keep collected samples cool (approximately 4°C).
 - 5. Laboratory analyses shall be conducted according to NYSDEC's ASP protocol. Deliverables shall be ASP Category A. Faxed results are to be provided to the Commissioner within 48 hours of sample collection. ASP deliveries are to be provided to the Commissioner within 30 days of sample collection. Laboratory shall be NYSDOH ELAP/CLP certified for the parameter being analyzed.

- G. An area of the building shall be considered decontaminated when laboratory analysis of associated wipe samples indicates the samples contain less than 10 $\mu\text{g}/100\text{ cm}^2$ for total PCBs.
- H. For porous building surfaces potentially impacted with PCB oils/fluids, collect representative core samples as directed by the Commissioner from the surfaces after the areas have been decontaminated and have dried.
 - 1. Collect a minimum of 3 core samples for PCB analysis (USEPA Method 8080).
 - 2. Place collected samples in clean sample containers labeled with the appropriate sample information.
 - 3. Collect one of the 3 collected samples as split samples and submit to the Commissioner for laboratory analysis using the Commissioner's laboratory.
 - 4. Keep collected samples cool (approximately 4°C).
 - 5. Laboratory analyses shall be conducted according to NYSDEC's ASP protocol. Deliverables shall be ASP Category A. Faxed results are to be provided to the Commissioner within 48 hours of sample collection. ASP deliverables are to be provided to the Commissioner within 30 days of sample collection. Laboratory shall be NYSDOH ELAP certified for the parameter being analyzed.
 - 6. An area of the building shall be considered decontaminated when laboratory analysis of associated core samples indicates the samples contain less than 1 mg/kg for total PCBs.
- I. Contractor is responsible for retesting where above limits are not met for decontamination.
- J. Coordinate the collection of wipe/core samples and visual inspections with the Commissioner.

1.04 WASHING METHODS:

- A. Guano-Coated Surfaces - Use the following methods for decontaminating guano-coated surfaces:
 - 1. Eliminate the access of birds to the affected area.
 - 2. Neutralize the guano using a low-pressure 10% - 20% chlorine solution wash
 - 3. Contain the affected area with critical barriers
 - 4. Maintain a negative air pressure differential
 - 5. Either manually or via HEPA vacuum, remove and containerize waste in double 6-mil poly bags. Decontaminate bags with hot soapy water before leaving containment area.
 - 6. Sample waste for characterization prior to disposal.

B. Worker protection

1. Prior to neutralization of the guano, erect the decontamination unit consisting of a dirty room, shower room, and clean area change room. Anti-bacterial soap shall be provided. The worker is to completely shower their body, and wash their hair with the anti-bacterial soap.
2. Respirator protection should consist of, at a minimum, of ½ face negative pressure respirators, with organic and HEPA filters.
3. Protective clothing shall consist of, calf length rubber boots, chemical resistant gloves, either rubber rain suits, or impermeable Ty-Vek suits. All disposable clothing should be disposed as waste. Rubber boots, rain suits, gloves should be containerized and decontaminated each day.
4. Workers performing the removal should participate in medical surveillance prior to undertaking the task, so that at risk members of the employee population can be eliminated from the task, and to establish a baseline for workers performing the removal.

C. Vacuuming - The vacuuming system shall be equipped with an intermediate cyclone collector/separator unit and be capable of dustless container change-out. The system shall be equipped with a minimum two-stage, positive filtration system. The first stage shall be 95% efficient at 1 micron and shall be of the automatic self-decontamination type. The second, or final, stage shall be HEPA filter with 99.97% efficiency at 0.3 microns. Use of extension wands for below grade and elevated surfaces is encouraged. Should worker entry into below grade pits, sumps, or other areas be required, proper confined space entry procedures shall be followed. The Contractor's proposed method of decontamination potential confined spaces and elevated surfaces shall be addressed specifically in the Project Work Plan.

D. High Pressure Water Blast - The water blast system utilized for the rigorous decontamination shall be capable of operation from water temperatures ranging from 75°F to 180°F. The Contractor's Project Work Plan shall address high pressure water blast methods. The system shall be capable of operation at a pressure of at least 20,000 PSI. The maximum jet reactive force shall not exceed 20 pounds when operating at 20,000 PSI and at a maximum water usage rate of 2.0 GPM. At no time during the operation of the water blast system shall the water usage rate exceed 5.0 GPM per individual blast unit. All water shall be collected immediately using a HEPA vacuum system. Splash-back shall be held to a minimum and the use of detector shrouds or other means of control may be required for worker protection and/or liquid containment. All structures and equipment (especially insulated pipes, electrical equipment, etc.) must be appropriately protected prior to conducting blasting. The acceptable decontamination level shall be to a residual-free condition. To achieve an acceptable decontamination level a minimum number of decontamination passes shall be required per the Contractor's approved Project Work Plan. The initial decontamination pass shall be performed with blast water at a minimum temperature of 175°F when measured at the blast nozzle.

- E. Scarification (for PCB and/or petroleum contaminated concrete). The scarifier should be capable of removing 1/16 on an inch of material per pass. Contractor must at a minimum perform two passes with the scarifier. The second pass should be performed perpendicular to the first pass. This method can only be used in asbestos free areas of the Site. Dust control methods must be employed to prevent the spread of visible emissions, or contamination outside of work area or exceedance of contaminant specific PEL action limit (50% of PEL) during scarification. Air monitoring may be required dependent on the contaminant(s) present, contaminant(s) concentration, and Site condition as determined by the Contractor and specified in the Contractor's HASP.
- F. Removal of Existing Liquids and Liquid Decontamination Residuals. The aqueous and non-aqueous liquids in any sumps, troughs, secondary containment systems, piping systems, process pumps and ancillary equipment, air pollution control devices, hydraulic cylinders, and other miscellaneous fluid encountered during decontamination (excluding rinse waters generated by the Contractor) shall be pumped, drained, wet-vacuumed, or otherwise removed and containerized by the Contractor in accordance with the Project Work Plan and treated and disposed of in accordance with Sections 02 86 00 – Removal of Drummed Waste and Decontamination Water and 02 71 00 – Water Treatment System.

1.05 CONFINED SPACE ENTRY:

- A. The Contractor shall be required to comply with OSHA 1910.146 Confined Space protocols and with Confined Space Entry requirements in Section 02 00 20 of the specifications for any decontamination or demolition activity involving confined spaces.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 QUALIFICATIONS:

- A. The Contractor and Subcontractors involved in any activity associated with the building decontamination and materials handling must have demonstrated at least two years' experience in cleaning, handling, and disposal of hazardous materials.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met.

END OF SECTION

SECTION 02 51 29

ASH / DUST / DEBRIS REMOVAL AND MATERIAL DECONTAMINATION

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. This section applies to decontamination of the Sealed Incinerator Rooms of the Destructor Building only. The Sealed Incinerator Rooms include the sealed furnace room, switchboard room, electrical control rooms No. 1 and No. 2, storage rooms Nos. 1, 2, and 3, the boiler room, ash conveyor room, upper portion of the receiving pit, upper portion of receiving floor, upper portion of the operations floor, charging room floors, and stairwell. Specifications for decontamination of garages and other buildings is provided in Section 02 51 00 – Building Decontamination.
1. This provides general methodologies and sequence which may be implemented for the removal of hazardous ash, dust, and debris from the Sealed Incinerator Rooms and decontamination of materials removed from the work areas within the Sealed Incinerator Rooms for recycling, salvage or non-hazardous disposal. One or more of the decontamination methods described or referred to in this section are to be utilized by the Contractor to perform the decontamination activities as identified in this specification. Contractor is responsible to furnish all equipment, labor, materials, and supplies necessary to complete work. The Contractor shall provide all Personal Protective Equipment (PPE) required to complete the work.
 2. All dust ash and debris is cross contaminated with friable ACM and heavy metals (cadmium and lead) at concentrations considered hazardous waste. In addition, PCB-containing oil residues are present in machinery, equipment and on various surfaces. Equipment and surfaces to be cleaned include, but are not limited to, concrete, floors, walls, ceilings, brick, structural steel, grating, pipes, conduits, fixed, semi-fixed and non-fixed items. Items to be disposed of as hazardous waste may include, but are not limited to, ash, refractory brick, asbestos containing material, debris, dust, hazardous material-bearing equipment, non-decontaminated equipment and apparatus, debris, decontamination liquids and tools, and PPE. Prior to starting work Contractor shall submit for Commissioner's approval, a project work plan which details Contractors proposed sequence and methods for completing all cleaning and materials disposal.
 3. All decontamination work shall be conducted in accordance with the requirements of this Specification and all NYSDOL requirements and variances. All of the Sealed Incinerator Room decontamination work shall be conducted in conjunction with asbestos abatement work under full containment and negative pressure conditions.

B. Waste Classification and Handling

1. Areas to be decontaminated are classified with respect to the waste material that shall be removed, including, but not limited to, hazardous dusts, dirt, debris, grime, mechanical systems, industrial equipment, building surfaces. The hazardous determination of the specified materials has been evaluated through representative surface sampling and laboratory analysis for specific constituents of concern.
2. Conduct laboratory sampling to classify wastes (including decontamination fluids and equipment) as required to ship the waste off-site in compliance with the manifesting and shipping requirements specified in 6 NYCRR Part 372.
3. Dispose of waste in an approved waste disposal facility. Prior to disposal, the Commissioner shall review the certifications of any facility used for disposal of waste.
4. Provide copies of all fully completed manifests, shipping papers, and disposal records, including weight receipts, to the Commissioner upon authorization and return from the landfill.
5. Historical exposure air monitoring data for cleanup activities similar in nature have documented that airborne lead and cadmium concentrations have been in excess of the established OSHA permissible exposure levels (PELs). Provide required PPE for work in areas exceeding OSHA PELs.

C. Perform the ash, dust and debris removal in the following sequence:

1. Mobilize, establish, and construct support facilities (i.e., construction trailer) as required by the General Conditions. Refer to Section 02 82 13 of this specification for required site preparation. Install any required scaffolding and lifting apparatus on exterior to insure appropriate access to all elevations. Plasticize interior and exterior areas as necessary to enclose the Sealed Incinerator Rooms.
2. Where required, lockout and tag-out mechanical and electrical energy according to applicable regulations (see Section 02 41 19.19). Coordinate any lockout/tag-out procedures with the Commissioner.
 - a. Electrical lockout/tag outs shall be performed by a certified electrician.
 - b. Ensure that Work Area wiring is de-energized and that the energy supply to the active facility areas are protected.
 - c. Provide temporary lighting for clear visibility throughout the work area.
 - d. Electrical powered equipment used within the work area shall be individually protected by in-line ground fault circuit interrupters (GFIs).

- e. In areas requiring power washing, all electricity shall be brought in from outside the work area.
3. Establish decontamination units in areas approved by the Commissioner. Coordinate the timing and exact placement of the decontamination areas and units with the Commissioner.
4. Isolate the work areas to prevent the migration of waste containing ash, dust and debris.
 - a. Establish temporary partitions within the Sealed Incinerator Rooms, as required, using wood 2" x 4" framing with 6 mil fire-retardant plastic sheeting on the work area partition side.
 - b. Construct full containment which encloses the Sealed Incinerator Rooms.
5. Provide area air monitoring for ambient dust and metals. Establish two air samplers at the exterior project limits and downwind of the Sealed Incinerator Rooms. Comply with 29 CFR 1926.55 for maintaining fugitive ambient dusts below 150 $\mu\text{g}/\text{m}^3$ by using dust control methods during work activities as specified. Exterior air samples shall be collected and submitted to a NYSDOH qualified laboratory for analysis daily. All area sampling costs including field and laboratory services are to be paid by the Contractor.
6. Clean floor drains, ducts, pits and trenches utilizing a combination of HEPA vacuuming and/or wet-wiping procedures as specified in 1.03 of this Section. All pipes leading to, or from, floor drains/sumps, etc. shall then be sealed water tight with concrete and remain sealed during the project.
7. Perform HEPA vacuuming of all interior surfaces of the Sealed Incinerator Rooms.
8. Perform asbestos abatement, hazardous material removal, and Sealed Incinerator Rooms cleaning.
9. Conduct a visual inspection of the cleaned areas in the presence of the Commissioner's On-Site Representative and collect random wipe samples from the decontaminated areas:
 - a. Provide access for the Commissioner to all cleaned surfaces.
 - b. An area is considered clean when laboratory analysis of clearance/confirmation samples demonstrates that the associated area contains less than the levels of contaminants specified in 1.02 of this Section.
 - c. Clean areas as directed, where laboratory analysis demonstrated that areas exceed specified clean up levels.

- d. After notification by the Commissioner that the clearance/confirmation wipe or core sample has been determined clean via laboratory analysis, remove physical barriers, provided that these actions shall not subject the area to contamination from work in other areas.
10. Characterize, pack, transport and dispose of all decontamination wastes including, but not limited to, contaminated ash, debris, dust, dirt, grime, painted surfaces, lead paint residue/chips, wash water, non-decontaminated equipment and apparatus and used decontamination equipment in accordance with all applicable Federal, State, and local regulations. Applicable regulations include, but are not limited to, the following:
 - a. 29 CFR 1910
 - b. 29 CFR 1926
 - c. 40 CFR 260-263
 - d. 49 CFR 106, 107, 171-179
 - e. 6 NYCRR 360, 364, 372
11. Ensure the safe and appropriate transport of wash water from the building to the liquid disposal containers.
12. No unauthorized discharges to city sanitary and/or storm sewers or other uncontrolled discharges shall occur. Decontamination water shall be treated and disposed of in accordance with Sections 02 86 00 – Removal of Drummed Waste and Decontamination Water and 02 71 00 – Water Treatment System.

1.02 EQUIPMENT AND MATERIAL DECONTAMINATION:

- A. Non-fixed and semi-fixed equipment, materials and apparatus moved to the equipment decontamination area shall be decontaminated using power washing, scrubbing, rinsing, and drying or a combination of methods.
- B. Water-based surfactants are to be approved by the Commissioner prior to use.
- C. For equipment containing PCB oils/fluids, collect representative wipe samples from the PCB oil stained non-porous surfaces and apparatus after the items have been decontaminated and have dried.
 1. Collect a minimum of 25 wipe samples for PCB analysis (USEPA Method 8080) using laboratory supplied sterile gauze pads that have been soaked in hexane. Using firm strokes with even hard pressure and a dedicated template, wipe a 100 cm² area of an individual piece of equipment or non-fixed surfaces.
 2. Place collected samples in laboratory provided/cleaned glass jars and label with the appropriate sample information (e.g., location, time, date, etc.).

3. Collect two split samples among the 25 collected samples and submit to the Commissioner for laboratory analysis using the Commissioner's laboratory.
 4. Keep collected samples cool (approximately 4°C).
 5. Laboratory analyses shall be conducted according to NYSDEC's ASP protocol. Deliverables shall be ASP Category A. Faxed results are to be provided to the Commissioner within 48 hours of sample collection. ASP deliverables are to be provided to the Commissioner within 30 days of sample collection. Laboratory shall be NYSDOH ELAP/CLP certified for the parameter being analyzed.
- D. For porous building surfaces potentially impacted with PCB oils/fluids, collect representative core samples as directed by the Commissioner from the surfaces after the areas have been decontaminated and have dried.
1. Collect a minimum of 15 core samples for PCB analysis (USEPA Method 8080).
 2. Place collected samples in clean sample containers labeled with the appropriate sample information.
 3. Collect two of the 15 collected samples as split samples and submit to the Commissioner for laboratory analysis using the Commissioner's laboratory.
 4. Keep collected samples cool (approximately 4°C).
 5. Laboratory analyses shall be conducted according to NYSDEC's ASP protocol. Deliverables shall be ASP Category A. Faxed results are to be provided to the Commissioner within 48 hours of sample collection. ASP deliveries are to be provided to the Commissioner within 30 days of sample collection. Laboratory shall be NYSDOH ELAP certified for the parameter being analyzed.
 6. An area of the building shall be considered decontaminated when laboratory analysis of associated core samples indicates the samples contain less than 1 mg/kg for total PCBs.
- E. For equipment and materials coated with dust/ash, collect representative wipe samples surfaces and apparatus for lead and cadmium analysis after the items have been decontaminated and have dried.
1. Collect a minimum of 50 wipe samples for total cadmium and total lead analysis (ASP Methods 200.7 and 239.2) using laboratory supplied sterile gauze pads that have been soaked in distilled water. Using firm strokes with even hard pressure and a dedicated template, wipe a 100 cm² area of an individual piece of equipment or non-fixed surfaces.
 2. Place collected samples in laboratory provided/cleaned glass jars and label with the appropriate sample information (e.g., location, time, date, etc.).

3. Collect four split samples among the 50 collected samples and submit to the Commissioner for laboratory analysis using the Commissioner's laboratory.
 4. Keep collected samples cool (approximately 4°C).
 5. Laboratory analyses shall be conducted according to NYSDEC's ASP protocol. Deliverables shall be ASP Category A. Faxed results are to be provided to the Commissioner within 48 hours of sample collection. ASP deliverables are to be provided to the Commissioner within 30 days of sample collection. Laboratory shall be NYSDOH ELAP certified for the parameter being analyzed.
- F. Non-fixed or semi-fixed equipment and apparatus shall be considered decontaminated when laboratory analysis of representative wipe samples indicate that these materials meet decontamination criteria (i.e., contain less than 100 µg/100 cm² for cadmium and less than 21.5 µg/100 cm² for lead) for contaminants encountered.
- G. Contractor is responsible for retesting where above limits are not met for decontamination.
- H. Coordinate the collection of wipe and core samples with Commissioner.
- I. Dispose of non-contaminated non-fixed and semi-fixed pieces of equipment and apparatuses as scrap.

1.03 WASHING METHODS:

- A. Guano-Coated Surfaces - Use the following methods for decontaminating guano-coated surfaces:
1. Eliminate the access of birds to the affected area.
 2. Neutralize the guano using a low-pressure 10% - 20% chlorine solution wash
 3. Contain the affected area with critical barriers
 4. Maintain a negative air pressure differential
 5. Either manually or via HEPA vacuum, remove and containerize waste in double 6-mil poly bags. Decontaminate bags with hot soapy water before leaving containment area.
 6. Sample waste for characterization prior to disposal.
- B. Worker protection
1. Prior to neutralization of the guano, erect the decontamination unit consisting of a dirty room, shower room, and clean area change room. Anti-bacterial soap shall be provided. The worker is to completely shower their body, and wash their hair with the anti-bacterial soap.
 2. Respiratory protection should consist of, at a minimum, of full face negative pressure respirators, with organic and Ultra HEPA filters. The Contractors

- respiratory protection plan shall address biological hazards of bird guano which is present in the work area.
3. Protective clothing shall consist of, calf length rubber boots, chemical resistant gloves, either rubber rain suits, or impermeable Ty-Vek suits. All disposable clothing should be disposed as waste. Rubber boots, rain suits, gloves should be decontaminated and containerized each day.
 4. Workers performing the removal should participate in medical surveillance prior to undertaking the task, so that at risk members of the employee population can be eliminated from the task, and to establish a baseline for workers performing the removal.
- C. Vacuuming - The vacuuming system shall be equipped with an intermediate cyclone collector/separator unit and be capable of dustless container change-out. The system shall be equipped with a minimum two-stage, positive filtration system. The first stage shall be 95% efficient at 1 micron and shall be of the automatic self-decontamination type. The second, or final, stage shall be HEPA filter with 99.97% efficiency at 0.3 microns. Use of extension wands for below grade and elevated surfaces is encouraged. Should worker entry into below grade pits, or other areas be required, proper confined space entry procedures shall be followed. The Contractors proposed method of decontamination for potential confined spaces and elevated surfaces shall be addressed specifically in the Project Work Plan.
- D. High Pressure Water Blast. The water blast system utilized for the rigorous decontamination shall be capable of operation from water temperatures ranging from 75EF to 180EF. The Contractors Project Work Plan shall address high pressure water blast methods. The system shall be capable of operation at a pressure of at least 20,000 PSI. The maximum jet reactive force shall not exceed 20 pounds when operating at 20,000 PSI and at a maximum water usage rate of 2.0 GPM. At no time during the operation of the water blast system shall the water usage rate exceed 5.0 GPM per individual blast unit. All water shall be collected immediately using a HEPA vacuum system. Splash-back shall be held to a minimum and the use of detector shrouds or other means of control may be required for worker protection and/or liquid containment. All structures and equipment (especially insulated pipes, electrical equipment, etc.) must be appropriately protected prior to conducting blasting. The acceptable decontamination level shall be to a residual-free condition. To achieve an acceptable decontamination level a minimum number of decontamination passes shall be required per the Contractors approved Project Work Plan. The initial decontamination pass shall be performed with blast water at a minimum temperature of 175°F when measured at the blast nozzle.
- E. Removal of Existing Liquids and Liquid Decontamination Residuals. The aqueous and non-aqueous liquids in any sumps, troughs, secondary containment systems, piping systems, process pumps and ancillary equipment, air pollution control devices, hydraulic cylinders, and other miscellaneous fluid encountered during decontamination (excluding rinse waters generated by the Contractor) shall be pumped, drained, wet-vacuumed, or otherwise removed and containerized by the Contractor in accordance with the Project Work Plan and treated and disposed of in accordance with Sections 02 86 00 – Removal

of Drummed Waste and Decontamination Water and 02 71 00 – Water Treatment System.

1.04 CONFINED SPACE ENTRY:

- A. The Contractor shall be required to comply with OSHA 1910.146 Confined Space protocols and with Confined Space Entry requirements in Section 02 00 20 of the specifications for any decontamination or demolition activity involving confined spaces.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 QUALIFICATIONS:

- A. The Contractor and Subcontractors involved in any activity associated with the required decontamination work or materials handling must have demonstrated at least two years' experience in cleaning, handling, and disposal of hazardous materials.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met.

END OF SECTION

SECTION 02 51 29.13

SEWER AND UTILITY CLEANOUT

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall furnish all labor, equipment, and materials required to perform all operations necessary to drain, purge, clean, and seal or remove all facility utilities, including but not limited to, all building sewers, troughs, sumps, pits, traps, discharge, and floor drain systems. In addition, the Contractor must backfill all unsealed pits, sumps, trenches, partial basements, and elevator pits. Prior to initiating sewer-related work, the Contractor must submit a Work Plan which specifies their proposed plan and protocols for the sewer and utility work. The work plan must also be approved by the Commissioner.
- B. In work areas requiring asbestos abatement and/or decontamination, the drain systems shall be plugged during abatement and decontamination and sewer and utility cleanout will proceed following completion of abatement and decontamination.

1.02 REGULATORY REQUIREMENTS:

- A. All work must be performed in accordance with the requirements of 29 CFR 1910.146 as well as the requirements of the general provisions in Specific Provisions Sections of these specifications and the Contract Drawings. All disconnections/plugging must be performed by a NYC licensed plumber. All sewer related work must be performed in accordance with NYCDEP regulations.

1.03 RELATED WORK:

- A. Section 02 41 19.16 Interior Demolition
- B. Section 02 51 00 Building Decontamination
- C. Section 02 51 29 Ash / Dust / Debris Removal and Material Decontamination

PART 2 - PRODUCT

Not Used

PART 3 - EXECUTION

3.01 EXAMINATION AND LOCATION DOCUMENTATION:

- A. Locate and identify on appropriately scaled site drawings the location of all utilities and associated piping systems. Identify any utilities that are found to be inaccessible

3.02 DECONTAMINATION:

- A. Decontamination of the structures shall consist of the removal of grease, sand, silt, solids, rags, debris, residual materials, etc., from each structure including horizontal and vertical sections of sewer systems.
- B. Selection of decontamination equipment and the method for decontamination shall be based on the condition and/or pipe material of the structure at the time work commences. FLUSHING TO FACILITATE DECONTAMINATION IS EXPRESSLY PROHIBITED.
- C. Satisfactory precautions shall be taken to protect all structures and appurtenances from damage that might be inflicted upon them by the improper use of decontamination equipment. Any damage inflicted by the improper use of the decontamination equipment, regardless of the decontamination method used, shall be repaired by Contractor at no additional cost to the City of New York.
- D. Sewer piping shall be bulk-headed downstream of the decontamination area to prevent releases of disturbed materials and rinse water.

3.03 DAMAGE PREVENTION DURING DECONTAMINATION OPERATION

- A. Contractor shall recognize that there are some conditions such as broken pipe and major blockages that prevent decontamination from being accomplished or where damage would result if decontamination efforts were continued. Should such conditions be encountered, the Contractor shall immediately notify the Commissioner. The Commissioner shall be notified of any conditions which warrant termination of decontamination activities.

3.04 DECONTAMINATION OPERATIONS EQUIPMENT

- A. Only hydraulic and/or high-velocity jet equipment shall be used by the Contractor to accomplish decontamination activities. Alternate equipment and/or methods shall not be permitted without the express written consent of the City of New York.
 - 1. Hydraulically Propelled Equipment - The equipment used may be of a moveable dam type and shall be constructed in such a way that a portion of the dam may be collapsed at any time during the decontamination operation to protect against flooding of the sewer. The moveable dam shall be equal in diameter to the pipe being cleaned and shall provide a flexible scraper around the outer periphery to insure removal of grease. If sewer decontamination balls or other equipment which cannot be collapsed is used, special precautions to prevent flooding of the sewers and public or private property shall be taken. Machines with direct drive that could cause damage to the pipe shall not be allowed.
 - 2. High-Velocity Jet Equipment - All high-velocity sewer decontamination equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two or more high-velocity nozzles. The nozzles shall be capable of producing a scouring action from 15 to 45 degrees in all size lines designated to be cleaned. Equipment shall

also include a high-velocity gun for washing and scouring manhole walls and floor. The gun shall be capable of producing flows from a fine spray to a solid stream. The equipment shall carry its own water tank, auxiliary engines, pumps, and hydraulically driven hose reel. When hydraulic or high velocity decontamination equipment is used, a suitable sand trap, weir, or dam shall be constructed in the downstream manhole in such a manner that all solids and debris are trapped and removed, thereby preventing such materials from passing into the next sewer section.

3.05 WASTE DISPOSAL

- A. Contractor shall insure that all debris and rinseate are properly collected, sampled and analyzed prior to discharge or disposal.

3.06 DECONTAMINATION WATER

- A. Contractor shall be responsible for all costs associated with providing water for hydraulic decontamination equipment.

3.07 SPECIAL CONDITIONS

- A. When Contractor encounters an obstruction that normally cannot be cleaned with equipment indicated above, Contractor shall notify the Commissioner immediately as well as record the location of the obstruction on the sewer location plans ("redline" drawings).

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 60 00

CONTAMINATED SITE MATERIAL AND WASTE REMOVAL AND DISPOSAL

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Characterize, remove, and dispose of fuel tanks, drummed liquid/solid wastes, water, and other potentially contaminated materials identified prior to or during abatement.
- B. Characterize, remove, and dispose of other drummed waste, liquid/solid wastes, fill, soil, water, demolition wastes, and sludge/sediment.
- C. Provide additional protection and services as specified herein.

1.02 SCOPE OF WORK:

- A. Characterize in accordance with the requirements of the receiving facility and USEPA and State requirements, remove, and properly dispose of waste materials from all areas in the project where it exists.
- B. In addition to the asbestos-containing materials (ACMs) described in Section 02 82 13, the following additional materials, which may present special waste characterization and disposal requirements, have been identified within the project Site:
 - 1. Waste oils
 - 2. Solvents
 - 3. Petroleum products
 - 4. PCB containing oils
 - 5. Ash, refractory brick, and debris considered RCRA hazardous waste
- C. The following hazardous materials reports have been prepared for the Site which identifies wastes known to be present at the City of New York facilities:
 - “Final Report of Hazardous Materials Survey (Salt Shed, M2 Garage, M5 Garage, Marine Transfer Station [MTS]), Demolition of All The City of New York Department of Sanitation (DSNY) Facilities Including The MTS at The Gansevoort Peninsula, 2 Bloomfield Street”, dated 11/30/2012.
 - “Final Report of Hazardous Materials Survey (Sealed Incinerator Rooms), Demolition of All The City of New York Department of Sanitation (DSNY) Facilities Including The Marine Transfer Station (MTS) at The Gansevoort Peninsula, 2 Bloomfield Street”, dated 12/06/2012.
- D. The Contractor must supply the name and address of all facilities that shall receive the

waste. The wastes include those associated with the decontamination, asbestos removal, demolition and equipment removal activities of the facility. These wastes may include asbestos containing materials, metals contaminated materials, petroleum products, PCB-containing materials, materials such as scrap metal, steel, copper, tin, piping, electrical, wood, concrete and masonry items.

- E. The handling, transportation and disposal of wastes shall be performed in strict accordance with USEPA, USDOT, State, local regulations and the City of New York policies and procedures.

1.02 TEMPORARY WASTE MATERIALS STORAGE AREA:

- A. All containerized waste materials are to be placed in a Temporary Materials Storage Area approved by the Commissioner. The Contractor shall install and maintain any containment structures (i.e., storage pads or berms), gates and fencing as necessary to secure the area.

1.04 WASTE STREAMS:

- A. Demolition will produce a wide range of materials, some of which have specific management requirements. Materials generated during demolition shall be separated by the Contractor or subcontractor according to their intended disposition (i.e., salvage, recycle, disposal) and the applicable regulatory requirements for the respective management method. Specific handling, transport and disposal requirements for the various materials are provided in the appropriate sections of the Technical Specifications. Materials generated during the process of demolition of the facility include, but are not limited to, the following:

1. Salvageable Building Components;
2. Salvageable Equipment;
3. Architectural "Soft" Building Debris (gypsum board, rubbish, etc.);
4. Structural Building Components (ferrous or non-ferrous metals, including straight steel and pipe which may be salvaged for reuse, cinder block, and brick concrete);
5. Petroleum Waste;
6. Heavy Metals and Asbestos Contaminated Brick, Equipment and Materials; Heavy Metals and Asbestos Contaminated Ash and Debris;
7. Contaminated Soil;
8. Contaminated Fill;
9. Contaminated Groundwater;
10. Containerized Waste Materials;
11. Structural Steel to be Recycled;
12. ACM;
13. PCB Containing Equipment;
14. PCB Containing Light Ballasts;
15. PCB containing Oils;
16. PCB Contaminated Metal and Concrete;
17. Mercury Containing Equipment
18. Equipment Containing Chlorinated Fluorocarbons;

19. Decontamination Water Possibly Containing Petroleum Products, PCBs, Metals, Chlorinated Solvents, and Asbestos;
20. Solvents;
21. Lead Based Paint Coated Materials; and,
22. Lead Based Paint Chips and Residue from Removal Activities.

- B. The above identified waste streams are combined in certain areas of the Site. As a result, the Contractor is responsible to ensure all handling, transport, and disposal of combined waste streams is performed in accordance with all applicable regulations.

1.05 REGULATIONS:

- A. Comply with applicable federal, state, municipal, and local regulations including, but not limited to, the following:
1. U.S. Environmental Protection Agency (USEPA), including Title 40, Code of Federal Regulations.
 2. Occupational Safety and Health Administration (OSHA), including Title 29, Code of Federal Regulations, and Parts 1910 and 1926, OSHA, U.S. Department of Labor.
 3. State of New York Rules and Regulations, including 6 NYCRR Part 360 and 364 regarding transport and disposal.
 4. Recommendations of the National Institute of Occupational Safety and Health (NIOSH).
 5. Transportation regulations, including U.S. Department of Transportation regulations, including Title 29 Parts 171 and 172 and New York State Department of Transportation rules and regulations.
 6. Applicable federal, state, and local government regulations.
 7. Industrial Code Rule 56.
- B. Disposal sites for all wastes shall be appropriately permitted by the State in which the facility is located to accept such material.
- C. Whenever there is a conflict or overlap of the above references, the most stringent provision is applicable.
- D. In the event that any requirement of this specification contradicts any such requirement, immediately notify the City of New York of such conflict or contradiction. In such cases, the regulation or law shall apply.
- E. Post all applicable regulations in a conspicuous place at the jobsite. Assure that the regulations are not altered, defaced or covered by other materials.

1.06 EMPLOYEE TRAINING REQUIREMENTS:

- A. Permit only persons with "40-hour" OSHA training in accordance with 29 CFR 1910.120 to participate in work involving the segregation and removal of the materials identified in this Section. All project workers must have OSHA 10-hour Construction training.

1.07 SUBMITTALS AND NOTICES:

- A. Prior to Commencement of Work, submit the documents described in this sub-section to the City of New York. Submittals must be bound together in one labeled, indexed submittal. See also general submittal requirements in the General Conditions.
- B. Begin no work until the following documents have been reviewed and accepted:
 - 1. A complete description of the Contractor's work plan, laying out the sequencing and phasing of the work to ensure the proper removal, characterization, and disposal of all special wastes (including the materials identified in this Section and the Asbestos-Containing Materials identified in Section 02 82 13).
 - 2. Evidence of the completion of appropriate OSHA training by Contractor's personnel.
 - 3. Copies of insurance certificates for all Contractors on-site, with limits as identified elsewhere in these specifications.
 - 4. Proof that all required permits, disposal site locations, and arrangements for transportation and disposal of wastes have been addressed and obtained.
- C. At the end of the removal and characterization of all special wastes, but at least five days prior to application for payment for this work, provide records showing final disposition of all special wastes removed from the project Site (see also Part 3 of this Section for waste manifest requirements).

1.08 PROTECTION OF CONTRACTOR'S PERSONNEL:

- A. The Contractor is solely responsible for the protection of his work force, in accordance with federal and state regulations. Worker protection shall include personnel protective equipment (including respiratory protection), at a minimum. In addition, protection from other hazards inherent in demolition projects shall be provided, including temporary shoring and support for building structural elements, as required.

1.09 TRANSPORTATION AND CONTAINMENT CONTROLS:

- A. The Contractor shall be responsible for transportation and containment controls utilized during the transport of materials associated with the remediation and demolition process. Refer to specific specification sections for transportation and disposal requirements. The Contractor shall provide the Commissioner with proposed methods of transportation for the

various waste streams prior to transport.

1.10 WASTE TRACKING:

- A. The Contractor shall develop a system to track waste management issues for the project. The tracking system shall include waste generation, storage, and disposal data.
- B. Sales of equipment and materials to recyclers, vendors, and other third parties must be properly documented to ensure that New York City stipulations and any applicable regulatory requirements are met during the sale. It is anticipated that many materials shall be processed by the Contractor which shall be sent to various facilities for recycling. All items, regardless of the disposal destination, shall require documentation to the Commissioner so as to record the location and disposition of the material.

1.11 WASTE MANAGEMENT:

- A. This section describes the sources and classifications of wastes that are anticipated to be generated throughout the project; the staging and characterization procedures that shall be used; the packaging and storage methods that shall be used once the wastes are characterized; and, the transportation and disposal requirements and approved disposal facilities for wastes. The Commissioner is to be notified of any tank, equipment, or line damage prior to draining. Specific regulatory and project requirements are provided in the appropriate sections of the Technical Specifications. It is the responsibility of the Contractor to comply with current federal, state and local regulations concerning the waste handling, transportation, and disposal of all wastes removed as part of this project.
- B. Staging Procedures - The manner in which the materials are staged is dependent on the classification of the material (waste or recycle), whether the material is solid or liquid, and the quantity that shall be generated. During the initial phase of work the Garage areas of the facility may be operational. Therefore, staging procedures must not disrupt facility operations. Materials shall be staged in accordance with applicable regulations within locations approved by the Commissioner.
- C. Packaging - The Contractor shall ensure that wastes from the demolition process are stored and placed in appropriate containers for storage and shipping. Waste materials that are to be sent off-site for disposal shall be loaded into appropriate DOT-approved containers and transported to the waste storage area to await disposal. A unique container identification number shall be assigned to each container to allow proper tracking during on-site management and off-site disposal. Each container shall be labeled with its unique container identification number, the date of generation, the type and approximate quantity of material, and the activity from which the waste was generated. This information shall be recorded by the Contractor and reviewed on a weekly basis to ensure that no materials are stored on-site while awaiting disposal for a period longer than the applicable regulatory mandated period (i.e., 90 days).
- D. Waste Disposal - The Contractor shall be responsible for providing appropriate containers, transporting, and disposing of all wastes including asbestos containing materials, metals contaminated materials, petroleum products, petroleum contaminated soil/groundwater,

solvents, construction and demolition debris. Construction and Demolition debris includes non-contaminated rubble, non-contaminated debris, and clean soil. All wastes must be taken to an appropriate disposal or recycling facility which has been previously coordinated with the Commissioner. The following summarizes the primary waste materials that shall be disposed of:

1. Construction and Demolition Debris: Demolition debris that is free of asbestos, metals-contaminated brick and other contaminants may be hauled and disposed of at a City of New York approved construction and demolition disposal or recycling facility. The Contractor must perform the appropriate testing to ensure the materials meet the selected disposal facilities regulatory requirements (i.e., TCLP analysis for lead).
2. Asbestos Materials: The Contractor shall be responsible for the transportation and disposal of all asbestos materials. The asbestos materials must go to a City of New York approved facility. The Contractor must provide copies of weight tickets and manifests on a daily basis. All asbestos containing materials removed from the incinerator must also be disposed of as RCRA hazardous metals contaminated waste.
3. Heavy Metals Containing Materials: Heavy metals containing materials from the Sealed Incinerator Rooms including ash, refractory brick, mortar, incinerator debris, dust, mercury switches, and electrical components must be removed, handled, transported and disposed of as RCRA hazardous wastes. All ash, dust, brick, mortar, and debris from within the incinerator building must also be disposed of as asbestos contaminated waste.
4. Lead Based Paint Coated Steel: The structural steel can be recycled as scrap metal.
5. Lead Based Paint Coated Materials: Lead based paint coated materials including concrete, wood, and brick shall be tested by the Contractor using TCLP analysis to ensure the materials meet the Contractor's selected disposal facility's regulatory requirements.
6. Fluorescent Light Ballasts: All fluorescent light ballasts shall be containerized and disposed of as PCB-containing waste.
7. Mercury Vapor Lamps: All mercury vapor lamps shall require special cleaning techniques. Mercury wastes shall be disposed as hazardous waste.
8. PCB containing electrical equipment: PCB containing electrical equipment shall be drained, cleaned, and containerized as PCB containing waste. The Contractor must perform the appropriate testing to ensure the PCB materials meet the selected disposal facility's regulatory requirements.
9. Drummed Wastes: All drummed wastes shall be tested to ensure the materials meet the Contractor's selected disposal facility's regulatory requirements.
10. Contaminated Soil: All excavated soil and fill shall be tested to ensure the materials meet the Contractor's selected disposal facility's regulatory requirements. Excavation and disposal of contaminated soil and fill shall be in accordance with Section 02 61 00.

11. Above Ground and Underground Storage Tank Associated Wastes: All tank contents, residues, contaminated soils, and contaminated groundwater shall be disposed of at a facility permitted to accept the various petroleum products and petroleum impacted products. The Contractor must perform any testing required to ensure these wastes comply with the selected disposal facility's regulatory requirements.

PART 2 - MATERIALS AND EQUIPMENT

Not Used

PART 3 - EXECUTION

3.01 TEMPORARY POWER AND LIGHTING:

- A. Provide temporary power for equipment and lighting within the work area as defined by all governing regulations and codes. Ensure safe installation and use of power and lighting within the work Site per applicable electrical code requirements. Provide safety lighting and ground fault interrupter circuits.
- B. The existing power at the facility may be partially or wholly disengaged and is not available for Contractor's use.

3.02 WORK BARRIERS:

- A. In addition to other barriers specified elsewhere, provide appropriate work barriers for the protection of the public from environmental concerns that may result from the removal and disposal of the materials identified in this Section.

3.03 NOTIFICATION, RESPONSE, WASTE CHARACTERIZATION, HANDLING, REMOVAL, AND DISPOSAL:

- A. General
 1. Demolition and excavation activities at the structures will generate spoils materials that will require proper handling procedures for reuse or disposal. In accordance with 6 NYCRR Part 360 and 6 NYCRR Part 371, spoils materials can be classified as "clean fill" (unregulated solid waste) or into several categories, as follows:
 - a. Construction and Demolition Debris (C&D)
 - b. Non-hazardous Industrial Solid Waste
 - c. Hazardous Solid Waste
 - d. Universal Waste
 2. Some of the materials likely to be encountered including friable and non-friable asbestos and waste have been identified in Specification Section 02 82 13, and in Part One of this Specification Section. The Characterization, Handling, Removal and Disposal of friable and non-friable asbestos wastes, of all "clean fill", of other C&D materials, and of other identified wastes shall be considered part of the Contractor's

lump sum bid price.

3. The wastes included in the work scope includes, but is not limited to the PCB ballasts, PCB electrical equipment, solvents, cleaners, paints, waste oils, CFCs, and fuel oil.

B. Identification of Wastes

1. The Contractor has the initial responsibility for identifying wastes on-site. During routine abatement and interior demolition activities, materials encountered and spoils generated are normally expected to be classified as asbestos wastes. The Contractor shall be familiar with such materials and shall handle them in accordance with their standard operating procedures.
2. A report form with a suitable sequenced numbering system shall be generated and used by the Contractor to identify discoveries of other wastes. Copies of the report shall be sent to the Commissioner and the City of New York by hand or by facsimile.
3. Within 48 hours of notification, the Commissioner will inspect the waste materials. The inspection will include visual observation, identification of noticeable odors, and/or field screening using a photoionization detector (PID), or similar procedure, as appropriate to the circumstance.
4. Based on the information available, an opinion will be formulated regarding the classification of the materials in question.
5. In addition to internal notification requirements, federal and state regulations may require notification and reporting to various regulatory agencies. Whenever practical, such reporting shall be coordinated through the Commissioner. The Contractor shall be knowledgeable of such reporting requirements and work to ensure that such reporting meets the requirements of the appropriate regulatory body.
6. As practical, the Commissioner will assist in resolving questions regarding appropriate characterization requirements.
7. For these additional materials only, additional characterizations required by disposal facilities which are above and beyond the requirements of state and federal regulators shall be subject to negotiation. The City of New York may require information from several disposal facilities and may direct use of alternate facilities when use of alternate facilities could result in a reduced cost to the City of New York.

C. Clean-Up or Removal Responses

1. The Contractor shall be prepared to provide an immediate clean-up or removal response as required in order to reduce the likelihood of further waste migration or

to allow completion of critical construction tasks.

2. The Contractor shall be prepared with the appropriate personnel, equipment, and materials for any of the following three types of immediate responses:
 - a. Application of sorbents or neutralizers for liquid wastes.
 - b. Pumping and containerizing of liquid wastes.
 - c. Excavation and containerizing of solid wastes.
3. Based on the effectiveness of the immediate response and appropriate analytical testing, as required, the Contractor and City of New York will determine whether operations can continue in the vicinity of the waste.

D. Waste Storage, Disposal, and Recordkeeping

1. All wastes shall be removed from the Site as soon as lawful and practical, remaining on-site for only so long as necessary to properly characterize the wastes.
2. All wastes shall be disposed of in accordance with local, state, and federal law.
3. Establish and perform routine and continuous recordkeeping to document the disposal of all wastes as described in paragraph 3.4 and to document the response actions for any uncovered waste materials which cannot be classified either as unregulated clean fill or as construction and demolition debris.

3.04 WASTE MANIFEST:

A. Waste Manifest System

1. Establish a manifest system that accounts for all wastes identified in this Section. Describe the manifest system in writing for review and acceptance by the Commissioner. Demonstrate custody over all wastes from the time the waste is removed from the work area until it is deposited at the landfill.
2. Provide final manifest and documents to the Commissioner within three (3) working days of the removal of wastes from the Site by the waste hauler.

- B. Remove all containerized waste from the Site as soon as practical and legal to do so.
- C. Properly dispose of all wastes.

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 61 00

EXCAVATION AND REMOVAL OF CONTAMINATED SOIL

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The work covered by this specification includes the excavation, management, testing, transport and disposal of contaminated soil. All excavated soil and fill shall be considered to be, at minimum, non-hazardous contaminated soils and disposed of off-site at a permitted landfill or disposal facility. A five-foot deep site-wide excavation is required. The work also includes backfilling, final site restoration and monitoring of soil and groundwater associated with the excavations and stockpiles, and any associated incidental work as deemed appropriate by the Commissioner. All work shall be conducted in accordance with all applicable Federal, State, and local regulations and the provisions of this and accompanying specifications.
- B. Currently available analytical data has determined contamination exists in soils and other fill materials. In order to ensure that contaminated soils and other materials are disposed of properly, all excavated soils or soils generated from site activities within the limits of excavation shall be stockpiled on site for sampling and characterization analysis by the Contractor prior to removal from site. As an alternative, the Contractor may propose a plan to pre-characterize soil in situ, so that soil can be direct loaded for disposal. The Contractor shall include all testing, excavation, stockpiling, loading/hauling and disposal costs of C&D and non-hazardous contaminated soils within the limits of excavation in his lump sum bid price. All excavated soil/fill shall be disposed of off-site at a permitted landfill or disposal facility.
- C. Site soil was characterized in the *Phase II Environmental Site Investigation Report for The Demolition of All DASY Facilities Including the Marine Transfer Station (MTS) at the Gansevoort Peninsula*, LiRo Engineers, Inc., January 15, 2013. The top 5-feet of materials are predominantly soil and general fill but also contain concrete foundations and C&D debris. Existing data show relatively high concentrations of heavy metals in soil, although no tested soil exceeded hazardous waste limits. Characterization testing may show that some soils exceed hazardous waste limits. The Contractor could also encounter non-hazardous petroleum-contaminated soils. Unit cost line items are included in the unit price schedule for the difference in Contractor's cost between transport and disposing of non-hazardous petroleum impacted soil compared to non-hazardous contaminated soils and the difference in Contractor's cost between transport and disposing of hazardous soil compared to non-hazardous contaminated soils. The Contractor shall be compensated for transport and disposing of non-hazardous petroleum impacted soil and hazardous soil on a unit cost basis using the unit costs provided by the Contractor.

1.02 DEFINITIONS:

- A. *Non-Hazardous Contaminated Soil*: soils with contaminant concentrations greater than NYSDEC DER-10/Technical Guidance for Site Investigation and Remediation, Appendix 5, ACLs for Restricted Residential Use; and which are not defined as petroleum-contaminated soil or hazardous soil.

- B. *Petroleum-Contaminated Soil*: Soil or sediment which contains a petroleum source such as a UST, AST or piping and which contains substantial quantities of mobile petroleum contamination (i.e., petroleum saturated) that is identifiable either visually, through strong odor, by elevated contaminant vapor or is otherwise readily detectable without laboratory analysis. This soil may be cross contaminated with other fill constituents such as metals or SVOCs. Petroleum contaminated soil was not observed during site investigations, however, petroleum was stored and used at the site and may be encountered at the site.
- C. *Hazardous Soil/Waste*: Any material that: 1) possesses at least one of four characteristics (ignitability, reactivity, corrosivity, or toxicity); 2) is a F, P, K or U listed waste as regulated under either the Federal Resource Conservation and Recovery Act (RCRA) or New York Environmental Conservation Law (ECL) 27-0903 and the implementing Federal and State regulations; or 3) appears on Federal or State hazardous waste lists.

1.03 REFERENCES:

- A. The publications listed below are incorporated into this specification and shall be read as if printed herein. In the case of conflict between the referenced documents and the following text, the stricter requirements shall apply.

AMERICAN PETROLEUM INSTITUTE (ANSI)

Supplement Bulletin 1628	Underground Spill Cleanup Manual Protection Against Ignitions Arising out of Static, Lightning and Stray Currents
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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS

D 3587-85	Classification of Soils for Engineering Purposes
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CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 260 - 270	USEPA's Hazardous Waste Requirements
40 CFR 136	Guideline for Establishing Test Procedures for Analysis of Pollutants

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 30	Flammable and Combustible Liquids Codes
NFPA 327	Recommended Practice for Handling Underground Leakage of Flammable and Combustible Liquids

U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA)

USEPA-SW-846 Test Methods for Evaluating Solid Waste,
Physical/Chemical Methods. Third Edition.
November 1986

USEPA Standard Operating Guide. July 1988

MANIFESTING AND TRANSPORTING (DOT)

49 CFR Hazardous Materials Transportation Regulations

1.04 CONTRACTOR SERVICES:

A. The Contractor shall furnish all materials, labor, tools, equipment, utilities, water and fuel supply, vehicular transportation, field log preparation, and necessary incidental services. The work shall include, but not necessarily be limited to, the excavation, handling and disposal of contaminated fill/wastes and soils to a depth of 5 feet at the site. All excavated soil and fill shall be considered to be, at minimum, non-hazardous contaminated soils and disposed of off-site at a permitted landfill or disposal facility. Supplemental instructions may be furnished by the Commissioner in the field.

1. Excavation of contaminated soil;
2. Removal and transport of excavated soils to a permitted landfill or disposal facility;
3. Transport and disposal of all cleaning wastes;
4. All necessary incidental services not specifically noted but which are required for completion of the specified work; and,
5. Environmental reporting. This includes submittal of the following items and their subparts described herein in accordance with technical specification SUBMITTALS:
 - a. Proof of qualification credentials;
 - b. Copies of transport manifests;
 - c. Contaminated Soil Field Report;
 - d. Logs, reports, and record keeping, as required by the Commissioner;
 - e. Bills of lading, Certified Weight Tickets.

1.05 REGULATORY REQUIREMENTS:

A. All work included in this contract shall be conducted in strict compliance with all applicable Federal, State and Local regulations, statutes, codes and policies.

1.06 CONTAMINANTS:

- A. Available soil sampling results shall be furnished to the Contractor. Soils are contaminated with heavy metals and/or petroleum products. Hazardous levels of lead may be found in soil. The Contractor shall be prepared to work with any materials as necessary and at all levels of OSHA mandated personal protection.

1.07 PERMITS AND CERTIFICATIONS:

- A. The Contractor shall be responsible for obtaining all of the necessary Federal, State, and local permits required for contaminated soil excavation, removal, transport, and remediation. In the event that an USEPA/State Hazardous Waste Site Identification Number is required for soil transport and disposal, the City of New York shall be responsible for obtaining the identification number and the Contractor shall be responsible for obtaining the transportation manifest.

1.08 SUPERVISION:

- A. The Contractor shall assign a foreman to be directly responsible for coordinating and directing all work required for the operations.

1.09 MOBILIZATION AND DEMOBILIZATION:

- A. Mobilization - The Contractor shall mobilize all personnel, supplies, and equipment to the project Site within 5 days of receipt of notice to proceed with field work. Mobilization shall consist of:
 - 1. The delivery to the Site of all labor, equipment and materials needed from the Contractor's place of business to the job Site; and,
 - 2. Complete assembly in satisfactory working order of all such equipment on the Site.
- B. Demobilization - Demobilization shall consist of the removal from the Site of all equipment and surplus materials after completion of the work. The Contractor shall not be reimbursed for costs associated with temporarily vacating the Site before completion of work.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 REMOVAL OF CONTAMINATED SOIL, EXCAVATED MATERIALS AND ASSOCIATED BERM/CONTAINMENT STRUCTURES:

- A. The Contractor shall confine operations to the active work area portion of the site as much as practical. The Contractor shall reduce the potential for cross-contamination of uncontaminated areas with contaminated soils by using appropriate decontamination protocols prior to moving between areas of contamination and minimizing double moving of materials.

- B. The Contractor will be responsible for sloping, benching or otherwise shoring the excavation areas as necessary in accordance with applicable New York State and OSHA regulations (New York State Code Rule 753, OSHA Part 1926).
- C. The Contractor will be responsible for determining if perched water is present within the proposed excavation depth and area. If free water is encountered, the Contractor will be responsible for dewatering prior to excavation and treating water prior to disposal in accordance with Section 02 71 00- Water Treatment System.
- D. All fill/waste and soils to be excavated for off-site disposal are to be properly characterized for disposal requirements by the Contractor at its own cost. All sampling will be conducted with the Commissioner's On-Site Representative present.
- E. Subsurface soil at the Site may contain concrete (or other material) obstructions which may be due to historic road beds or due to large pieces of rubble used as historic fill. Other historic construction and demolition debris is also present in the fill. The Contractor will be responsible for any segregating/screening of debris and characterization required for disposal.
- F. The excavated fill/waste or soils may be loaded directly into the containers to be used during transportation, without any stockpiling of excavated materials. Should the "direct-loaded" methodology be selected by the Contractor, the means and methods to characterize the soils in place prior to excavation will need to be first approved by the Commissioner.
- G. The Contractor may propose the use of temporary stockpiling in pre-designated staging areas as a means to expedite the project schedule or lower the overall project cost.
- H. If staging areas for soil stockpiling are proposed by the Contractor, they shall meet the following requirements:
 - 1. The staging area(s) shall be constructed to prevent the spread of any contamination to surrounding uncontaminated soils, surfaces, and/or groundwater.
 - 2. The staging area(s) shall have bermed sides and be lined with a minimum 20 mil HDPE sealed, watertight liner. Within the bermed area there will be sump to allow the removal of any liquids that may accumulate within staging area. The Contractor shall take sufficient precautions (i.e., placement of geotextile and /or aggregate above and/or below the liner) to ensure the integrity of the liner during its use. This liner shall be properly transported and disposed of by the Contractor when the staging area is no longer needed

3. The Contractor shall provide a minimum 20 mil sealed, watertight liner to cover staged materials. Staged materials shall be covered at all times to prevent contaminated runoff, wind blowing, or dust generation.
 - I. The Contractor shall keep contaminated materials classified for different types of disposal segregated. Excavation and stockpiling operations for the different materials must not be mixed, unless otherwise approved by the Commissioner.
 - J. Groundwater or standing water in excavations must be removed and properly handled and treated in accordance with Section 02 71 00 – Water Treatment System. The Contractor shall be responsible for implementing any run-on controls necessary to minimize run-on from entering excavations. Standing water from precipitation events in excavations must be handled per approval of the Commissioner.
 - K. The Contractor shall employ dust control methods during handling activities as necessary. The Contractor shall use water or water amended with an appropriate surfactant, used in accordance with the manufacturer's recommendations, or other means to control dust acceptable to the Commissioner. No visible dust is permitted beyond the limits of the exclusion zone as a result of excavation activities, as determined by the Commissioner.
 - L. The Contractor shall not load fill/waste and/or other material into the vehicles/containers when it is raining without prior approval from the Commissioner. All fill/waste, soil and other material shall remain covered during rain.
 - M. The Contractor shall be responsible for providing adequate protection against erosion during all field activities.

3.02 REMOVAL AND TRANSPORT OF CONTAMINATED STOCKPILED SOILS

- A. Security of Materials During Transport - The Contractor shall ensure that all materials are secured during transport. The Contractor shall address this issue as part of their plan of operations for UST removal specified in Section 02 65 00.
- B. Transport Manifests, Bills of Lading, Certified Weight Tickets - The Contractor shall obtain and submit two (2) copies of all transport manifests, bills of lading, and certified weight tickets for recycling and/or disposal of all materials to the Commissioner within 3 calendar days of transport of any material. Soils shall be transported to either a RCRA permitted facility or permitted transport facility for treatment and disposal. Receipts shall indicate at a minimum the following information: date, time, driver, remediation or recycling facility, quantity and type of material delivered, remediation method, RCRA facility permit number, as appropriate, and roundtrip travel mileage from the work Site to the facility.

3.03 TREATMENT AND DISPOSAL OF CONTAMINATED SOIL

- A. Contaminated soil shall be treated and disposed of in an environmentally safe and responsible manner in accordance with all applicable Federal, State or Local requirements. If the soil to be treated is a Federal, State or Local hazardous or dangerous waste, the Contractor shall coordinate with the Commissioner for any special disposal and transportation requirements. The Contractor shall utilize disposal facility permitted to receive site wastes. Contaminated soil shall not be disposed of on-site.

3.04 MAINTENANCE OF SOIL STOCKPILE CONTAINMENT STRUCTURES DURING CONSTRUCTION

- A. The Contractor shall ensure during all stages of field work that contaminated soil is properly isolated from the surrounding environment to prevent contamination migration. The Contractor shall at no time leave stockpiled materials uncovered and unattended. The Contractor shall replace, secure and maintain soil containment structures (berming, poly sheeting, hold down tires, etc.) whenever the Site is left unattended, until such time as the entire quantity of stockpiled material is safely removed and the Site has met final restoration requirements. Contractor shall maintain stockpiles until removal. Stockpiles must be removed within six months and prior to final completion.
- B. Berms - Berms shall be constructed around stockpiled materials to contain contaminated soils and to prevent contamination from migrating. Upon arrival at the Site, the Contractor shall inspect the berms for integrity. In the event that damage to the berms is identified, the Contractor shall notify the Commissioner immediately. The Contractor shall maintain the existing berms at a minimum height and thickness of one foot for the duration of construction. Trenches are not an acceptable substitute for berms.
- C. Plastic or Polyethylene Liner - All stockpiled soils shall be secured against contamination migration due to wind, rain, etc. through the use of polyethylene liners and covers. The Contractor shall inspect the integrity of the polyethylene and any existing stockpiles upon arrival at the Site. In the event that damage to the polyethylene lining or cover is identified, or the liner or cover is not present, the Contractor shall notify the Commissioner immediately. If the Contractor's activities, prior to start of removal of soil, including operation of equipment on liners and/or covers, damages plastic or polyethylene liners or covers, the Contractor shall be responsible for replacement of liners and/or covers. Replacement materials shall consist of a 10-mil minimum plastic liner (Polyethylene) which shall be used to line the bottom of the soil storage areas and to cover the stockpiled soils. If more than one continuous piece of plastic is used for the liner or cover, it shall be sealed at the edges with an appropriate sealer (duct tape, etc.). The liner and cover shall be sufficiently larger than the areas of stored soil to cover the stored soil plus two feet of excess on all sides.

3.05 REMOVAL, TRANSPORT AND DISPOSAL OF SOIL CONTAINMENT STRUCTURES

- A. The Contractor shall be responsible for all work associated with removal, transport and disposal and/or final deposition of soil containment structures. The Contractor shall stockpile separately uncontaminated soils used for constructing berm containment structures at the Site.

3.06 EXCAVATION, REMOVAL, TREATMENT AND DISPOSAL OF MATERIALS:

- A. The Contractor shall be responsible for transporting, treating, and disposing of any contaminated excavated soils, as required in accordance with the technical specification described herein.

3.07 EXCAVATION HOLE SECURITY

- A. The Contractor shall place chain-link security fencing around the excavation holes any time the Site is left unattended by the Contractor until such time as the excavation hole is backfilled to the original surface level. The chain-link fence shall be fabricated of 9-gauge zinc or aluminum coated steel wire woven in 2-inch mesh and shall not be less than six (6) feet in height, and shall be capable of withstanding a minimum lateral force of 200 lbs.

3.08 DEMOLITION AND CLEANUP:

- A. After completion of the work, all tools, appliances, surplus materials, temporary drainage rubbish and other debris incidental to work shall be removed in accordance with this section.
- B. Burning of Debris - Burning for disposal of refuse and debris shall not be permitted.
- C. Title to Materials - Title to all materials and equipment to be demolished, except City of New York Department of Sanitation salvage and historical items, is vested in the Contractor when the equipment or material to be demolished is removed from the work Site.
- D. Demolition, Removal and Recycling or Disposal of Unsalvageable Materials - Concrete, asphalt, tires, polyethylene and other noncombustible or unsalvageable materials shall be removed and transported for recycling or disposal, as approved, in accordance with all Federal, State and Local regulations. All materials shall be disposed of for recycling unless no facility accepting a particular material can be identified and the Commissioner approves.
- E. Debris and Rubbish Removal - Rubbish and debris shall be removed from property daily, unless otherwise directed, so as to not allow accumulation inside or outside of the work perimeter. Materials that cannot be removed daily shall be stored in areas specified by the Commissioner. Debris and rubbish shall be removed and disposed from all excavations
- F. Debris Control During Transport - All materials shall be contained during transport in a manner so as to prevent spillage and materials from reaching streets or adjacent areas. All materials shall be transported in accordance with all Federal, State and Local regulations.

3.09 LOGS, REPORTS, AND RECORD KEEPING:

- A. The following logs, reports, and records shall be developed, retained, and submitted to the Commissioner and/or entitled regulatory agencies upon request (unless otherwise noted in previous sections):
 - 1. Training logs including employees' printed names and signatures in addition to training subject and date or copy of applicable training certificate;

2. Daily safety inspection logs;
3. Employee/visitor/register;
4. Medical opinions/certifications;
5. Environmental and personal exposure monitoring records;
6. Phase-out reports (final documentation verification certificates, summary of air monitoring data, final medical certificates, etc.); and,
7. A copy of all State licensing certificated required to conduct all required activities.

- B. All personnel exposure and medical monitoring records shall be maintained in accordance with applicable OSHA standards, 29 CFR 1910 and 1926 (including OSHA 200 log and accident/first aid reports)

3.10 QUALIFICATIONS:

- A. The Contractor and/or Subcontractors responsible for the Site-wide excavation work must have at least three years of soil remediation experience.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met.

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 65 00

REMOVAL OF UNDERGROUND STORAGE TANKS

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall furnish all labor, equipment, and materials required to perform all operations necessary to remove soils, dispose of tank contents, residues, contaminated soils, and debris and remove and dispose of underground and above ground storage tanks (USTs), fuel dispensers, and all appurtenances as required by the Contract Documents or as indicated by the Commissioner.
- B. The following registered USTs are present at the site:

Capacity/Type	Contents
2,500-gallon	Diesel
2,500-gallon	Diesel
4,000-gallon	Unleaded Gasoline
600-gallon	Hydraulic oil
600-gallon	Motor oil
1,000-gallon	Waste oil
600-gallon	Motor oil

1.02 APPLICABLE REFERENCES:

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by basic designation only and shall be the latest published version.
- B. American Petroleum Institute (API)
 - API Publ 1628 Assessment and Remediation of Underground petroleum Releases
 - API RP 2015 Cleaning Petroleum Storage Tanks
 - API RP 1604 Removal and Disposal of Used Underground Petroleum Storage Tanks
- C. United States Environmental Protection Agency (USEPA)
 - USEPA 8021 1987 Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography with PID and Electroconductivity Detector in Series
 - USEPA 8270 1986 Semi-volatile Organic Compounds in Water by Gas Chromatography/Mass Spectrometry Using a Capillary Column

D. New York City Fire Department

FP Directive 3-73 Division of Fire Protection

E. New York State Department of Environmental Conservation (NYSDEC)

6 NYCRR Part 612 Registration of Bulk Storage Facilities

6 NYCRR Part 613 Handling and Storage of Petroleum

6 NYCRR Part 614 Standards for New and Substantially Modified Petroleum Storage
Facilities

NYSDEC Memo #1 NYSDEC Spill Technology and Remediation Series (STARS) Memo #1:
Petroleum-Contaminated Soil Guidance Policy

NYSDEC Guidance NYSDEC Spill Prevention Operations Technology Series (SPOTS) No. 14:
Document Site Assessments at Bulk Storage Facilities

1.03 RELATED WORK:

A. SECTION 02 41 19.16: INTERIOR DEMOLITION

1.04 PERMIT AND LICENSE REQUIREMENTS:

- A. Prior to the commencement of work under this Contract, any permits or licenses required to perform the work shall be obtained by the Contractor at the Contractor's own cost and expense. Determining license and permit requirements shall be the responsibility of the Contractor.
- B. New York State Department of Environmental Conservation (NYSDEC) - Storage tanks must be registered with the New York State Department of Environmental Conservation (NYSDEC). If a tank is going to be closed or its use shall change, and it is not currently registered, the tank must be registered by the Contractor before proceeding. The NYSDEC (Region 2) shall be notified of the intent to close the tanks 30 days prior to initiation of closure activities. The Contractor shall pay any and all fees associated with the registration and notifications. The Contractor shall, in addition to other requirements of these specification, comply with the requirements of 6 NYCRR Part 612, 6 NYCRR Part 613, NYCRR Part 614, NYSDEC Memo #1, and NYSDEC Guidance Document.
- C. New York City Fire Department - The Contractor shall provide an affidavit of permanent closure by purging and removal of the tanks for each tank within 7 days of tank removal. Affidavit must be prepared in a format acceptable to the New York City Fire Department. Affidavit must be completed by a person licensed for motor fuel installation and repairs. Affidavit must be submitted to the New York City Fire Department, Bulk Fuel Safety Unit.
- D. New York City Department of Transportation - The Contractor shall obtain sidewalk opening

permits from NYCDOT, as required, to complete storage tank excavation and removal.

1.05 REMOVAL OF ELECTRICAL EQUIPMENT

- A. All electrical equipment associated with the USTs shall be removed by the Contractor. Contractor is responsible for terminating the utilities in coordination with the service provider and for ensuring that the terminations are completed prior to removal of the UST.

1.06 PROTECTION OF EXISTING STRUCTURES AND UTILITIES:

- A. All necessary precautions shall be taken to assure that no damage occurs to existing structures and appurtenances and utilities to remain in place. Any buried utilities encountered which are not shown on the Contract Drawings marked out by the Contractor, or otherwise indicated, shall be reported immediately to the Commissioner and shall not be disturbed without prior approval of the Commissioner.

1.07 SPILL PREVENTION:

- A. Any releases to the environment of tank contents or cleaning liquids shall be remediated by the Contractor as directed by the Commissioner at no cost to the City of New York. The Contractor's spill prevention measures shall be fully described in the Spill Prevention portion of the Contractor's Plan of Operations.

1.08 REMOVED MATERIAL:

- A. Except as otherwise set forth by the Commissioner, all removed materials shall become the property of the Contractor who shall promptly remove them from the work Site and dispose of the same in accordance with Part 3 of this Section. Storage of removed material within the Work Site shall not be permitted.

1.09 SUBMITTALS:

- A. Plan of Operations - A Plan of Operations shall be prepared and submitted to the Commissioner for approval within 15 days after the date of Notice to Proceed. The plan shall describe methods, equipment, and sequences of operations, including, but not limited to:

1. Tank contents removal;
2. Spill prevention;
3. Exploratory excavations;
4. Tank purging procedure;
5. Interior and exterior tank cleaning procedure;
6. Wastewater collection and disposal;
7. Facility to perform analyses;
8. Permanent removal of underground and aboveground storage tanks;
9. Anticipated use, recycling or disposal of contents;
10. Soil/Groundwater Sampling procedure; and,
11. Management/Disposal of Contaminated Soil and Groundwater.

12. Work shall not be started until the plan has been approved by the Commissioner.
- B. Tank Closure Report: A tank closure report for each tank removed shall be prepared by the Contractor and submitted to the Commissioner for approval. The tank closure report shall be in accordance with paragraph 3.07.
 - C. Chemical Data Acquisition Plan: A Chemical Data Acquisition Plan (CDAP) must be provided to the Commissioner and the City of New York prior to the commencement of work.
 - D. Results of Testing: Documentation of the assessment performed, including analytical results shall be provided to the Commissioner and to the NYSDEC.
 - E. Waste Manifests: Copies of manifests required to transport any waste materials shall be furnished to the Commissioner not later than the day following their preparation.
 - F. Documentation of Treatment or Disposal: Documentation of acceptance of waste materials by a facility legally permitted to treat or dispose of those materials shall be furnished to the Commissioner not later than 7 days following delivery of those materials to the facility.
 - G. Letters of acceptance from the facility and haulers acknowledging agreement to accept the waste material shall be furnished to the Commissioner not more than 14 days before transporting any hazardous or toxic materials.
 - H. The Contractor shall be responsible for all fines incurred by the City of New York as a result of the Contractor's actions.

1.10 TANK DESCRIPTIONS:

- A. Definition: For the purpose of this specification all oil/water separators have been classified as a tank. Wherever a requirement or references is made to a tank it shall include any oil/water separators.
- B. Locations: General locations of all tanks are shown on the Contract Drawings. Specific locations of some tanks may be unknown or uncertain. Specific locations of tanks shall be defined by exploratory excavations performed by the Contractor at no additional cost to the City of New York.
- C. Tank Contents: Tanks have been used for storage of petroleum products.

PART 2 - PRODUCT

Not Used

PART 3 - EXECUTION

3.01 TANK CONTENTS REMOVAL AND DISPOSAL:

- A. Salvageable Lube Oil, Transmission Fluid, Antifreeze, Fuel Oil, Diesel Fuel and Gasoline - All salvageable lube oil, transmission fluid, antifreeze, fuel oil, diesel fuel, and gasoline shall be transferred by the Contractor to another City of New York facility as designated by the Commissioner. If storage capacity is not available, then salvageable fuel becomes the property of the Contractor for beneficial use or disposal at no additional expense to the Department of Sanitation.
- B. Sludge Material/Waste Oil - Sludge shall be collected in new or reconditioned 55-gallon drums or roll-off containers. Drums or containers shall be sealed water-tight to prevent rain infiltration and leaking of sludge and waste oil and stored on-site in such a manner that the contents shall not spill or leak. Chemical sampling and analyses of sludge and waste oil shall be conducted and paid for by the Contractor in accordance with environmental regulatory requirements, as approved by the Commissioner. Analytical results shall be provided to the Commissioner as soon as possible after receipt of results. Drums or containers shall be labeled in accordance with Federal and State Regulations.
- C. Contaminated water shall be collected in new or reconditioned 55-gallon drums or roll-off containers. Drums or containers shall be sealed water-tight to prevent infiltration and leaking of water. Drums or containers shall be stored on-site in such a manner that the contents shall not spill or leak. Chemical sampling and analysis of the waste shall be conducted and paid for by the Contractor in accordance with environmental regulatory requirements, as approved by the Commissioner. Analytical results shall be provided to the Commissioner within five working days after receipt of results. Drums or containers shall be labeled in accordance with Federal and State Regulations.
- D. Disposal - Sludge and waste oil shall not be on-site for more than 90 days. Information and documentation requirements including any required sampling for transport, salvage, treatment or disposal shall be determined and provided by the Contractor. Sludge and waste oil shall be disposed of in accordance with environmental regulatory requirements at no additional cost to the City.

3.02 CLEANING OF TANK:

- A. The tank storage systems, including all tanks and piping, shall be purged of flammable vapors. Storage tanks shall be cleaned in accordance with API RP 2015. Steam shall not be used for either purging or cleaning a tank or other equipment. An affidavit of such purging, signed by the Contractor's licensed underground system installer, shall be filed by the Contractor with the Commissioner of the City's Fire Department, Division of Fire Prevention. The Contractor shall comply with all OSHA requirements and regulations.

3.03 PERMANENT REMOVAL OF UNDERGROUND AND ABOVE GROUND STORAGE TANKS:

- A. Access to the interior of the tanks shall be made through existing manholes. If the tanks do not have manholes, the Contractor shall excavate (as required) and provide an opening into the tank after purging. After removal of the tanks, the Contractor shall repair the disturbed area to match the surrounding area.

- B. The procedures for closing the tanks shall include, but not be limited to the following:
1. Remove all product that can be pumped out.
 2. Drain and flush piping into the tanks.
 3. Remove remaining liquid from the tanks.
 4. All exposed piping, gauge lines, and dispensers, with the exception of the vent lines, shall be removed and disposed of. The remaining pipes shall be capped.
 5. The tank storage systems, including all tanks and piping, shall be purged of flammable vapors as described in Section 3.02 above.
 6. The interior of the tanks shall be cleaned with absorbent pads or other approved methods.
 7. The tanks shall be rendered useless by cutting or drilling and removed and disposed of in accordance with API RP 1604.
- C. All tanks shall be completely decontaminated prior to removal from the Site. The Contractor shall transport and dispose of the tanks in accordance with all applicable New York City, State and Federal regulations. The Contractor may salvage usable above ground storage tanks for his beneficial use. The Contractor shall provide written documentation stating the final disposition of each tank.

3.04 DISPOSAL OF EXCAVATED SOIL:

- A. The Contractor shall assume all excavated soil as petroleum contaminated. Soil must be disposed of in accordance with applicable New York City, State and Federal regulations. The Contractor shall dispose of all petroleum contaminated soil at a facility which is permitted by the New York State Department of Environmental Conservation to accept such materials. The Contractor shall secure all permits required in connection thereof and provide the Commissioner with all documentation regarding the disposal of such soil. The Contractor shall excavate soils in accordance with Section 02 61 00 – Excavation and Removal of Contaminated Soil.

3.05 EXCAVATION BACKFILL:

- A. All bracing, backfilling and shoring shall be done in accordance with Sections 31 23 00 – Backfill of Building and Utility Removal Areas and 31 23 23.13 – Backfill Material Environmental Testing Requirements. Any excavations involving sidewalks or roadways must be paved with like materials to the satisfaction of NYCDOT.

3.06 SITE ASSESSMENT:

- A. General: The Contractor shall perform a site assessment to determine if there is any contamination present at the Site. The site assessment shall be conducted in accordance with

NYSDEC Guidance Document SPOTS No. 14 and as directed by the Commissioner.

- B. Sampling Procedure: In general, the Contractor shall conduct a minimum of six soil samples around each tank excavation. The Contractor shall conduct one sample from each side-wall of each tank excavation, one sample from the bottom of each excavation and one sample from a depth of two or three feet below the bottom of each excavation. The Contractor shall collect a minimum of one groundwater sample from each excavation.
- C. The Contractor shall submit all samples collected for lab analysis. Sample collection and lab analysis shall be conducted in accordance with subparagraph 3.06.4 and 3.06.5 respectively.
- D. Sample Collection: Sample collection shall be conducted in accordance with API Publication 1628.
- E. Lab Analysis: Samples collected for analysis shall be sent to the Contractor's independent testing lab. Samples shall be analyzed for STARS list VOC's using USEPA Test Method 8021 plus methyl tert butyl ether (MTBE) and SVOC's using USEPA Method 8270. The Contractor shall submit the lab analysis results to the Commissioner within seven days of the sampling.

3.07 TANK CLOSURE REPORT:

- A. Tank Closure Report shall be prepared in a standard three ring binder and submitted within 14 days of completing work at the Site. Tank Closure Reports shall include the following information as a minimum:
 - 1. A cover letter signed by a responsible company official certifying that all service involved have been performed in accordance with the terms and conditions of this Specification.
 - 2. A narrative report describing what was encountered at the Site, including:
 - a. Condition of the UST/AST
 - b. Any visible evidence of leaks or stained soils
 - c. Results of vapor monitoring readings
 - d. Actions taken including quantities of material treated or removed
 - e. Reasons for selecting sample locations
 - f. Sample locations
 - g. Sample collection data such as time of collection and method of preservation
 - h. Whether or not groundwater was encountered
 - 3. Copies of all analyses performed for disposal.

4. Copies of all waste analyses or waste profile sheets.
5. A letter stating final disposition of each tank (i.e., disposal, recycle, salvage)
6. Copies of all certification of final disposal signed by the responsible disposal facility official.
7. Information on who sampled, analyzed, transported, and accepted all waste encountered and copies of manifests.
8. Copies of all analysis performed for verification that underlying soil is not contaminated, with copies of chain-of-custody for each sample. All analyses shall give the identification number of the sample analyzed.
9. Scaled one-line drawings showing tank locations, limits of excavation, limits of contamination, underground utilities within 50 feet, sample locations, and sample identification numbers.
10. Progress Photographs: The Contractor shall take a minimum of 4 views of the Site showing such things as the location of each tank, entrance/exit road, and any other notable Site condition before work begins. After work has been started at the Site, the Contractor shall photographically record activities at each work location daily. Photographs shall be 3 x 5 inches and shall include:
 - a. Soil removal, handling and sampling
 - b. Unanticipated events such as discovery of additional contaminated areas
 - c. Soil stockpile area
 - d. Tank
 - e. Fill placement and grading
 - f. Post-construction photographs. After completion of work at each Site, the Contractor shall take a minimum of four (4) views of the Site. Prints shall illustrate the condition and location of work and the state of progress. The photographs shall be mounted and enclosed back-to-back in a double face plastic sleeve punched to fit standard three ring binders. Each color print shall show an information box, 1-1/2 x 3-1/2 inches. The information box for the 3 inch x 5 inch photographs shall be scaled down accordingly, or taped to the bottom of the photo. The box shall be typewritten and arranged as follows:

Project No .

Contract No.

Location

Contractor/Photographer

Photograph No.
Description
Direction of View

Date/Time:

3.08 QUALIFICATIONS:

- A. The Contractor and/or Subcontractors involved in any activity associated with the closure or removal of underground or above ground petroleum storage tanks must have demonstrated at least two years' experience in petroleum storage tank closure. The Contractor shall be a New York City licensed installer for underground tank systems.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met.

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 65 00.10

ABOVEGROUND STORAGE TANK REMOVAL AND DISPOSAL

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall furnish all labor, equipment, and materials required to perform all operations necessary to remove and dispose of tank contents, residues, contaminated debris and remove and dispose of ASTs indicated on the Contract Drawings, specified herein, or as required by the Commissioner.
- B. The following registered ASTs are present at the in the M2 Garage area at City of New York DSNY facilities:

Capacity/Type	Contents
550-gallon AST	Hydraulic oil
550-gallon AST	Hydraulic oil
275-gallon AST	Waste oil
275-gallon AST	Motor oil
275-gallon AST	Motor oil
275-gallon AST	Motor oil
275-gallon AST	Waste oil
275-gallon AST	Motor oil

1.02 APPLICABLE REFERENCES:

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by basic designation only and shall be the latest published versions.
 - 1. American Petroleum Institute (API)
API RP 2015 Cleaning Petroleum Storage Tanks
 - 2. Environmental Protection Agency (USEPA)
USEPA 8021 1987 VOCs in Water by Purge and Trap Capillary Column Gas Chromatography with PID and Electroconductivity Detector in Series
USEPA 8270 1986 SVOCs in Water by Gas Chromatography/Mass Spectrometry Using a Capillary Column
 - 3. New York State Department of Environmental Conservation (NYSDEC)
6 NYCRR Part 612 Registration of Bulk Storage Facilities

6 NYCRR Part 613	Handling and Storage of Petroleum
6 NYCRR Part 614	Standards for New and Substantially Modified Petroleum Storage Facilities
NYSDEC Memo #1	NYSDEC STARS Memo #1: Petroleum-Contaminated Soil Guidance Policy
NYSDEC Guidance Document	NYSDEC SPOTS No. 14: Site Assessments at Bulk Storage Facilities

1.03 RELATED WORK:

- A. Section 02 60 00: Contaminated Site Material and Waste Removal and Disposal
- B. Section 02 84 16: Removal of Universal Waste

1.04 PERMIT AND LICENSE REQUIREMENTS:

- A. Prior to the start of work under this Contract, any permits or licenses required to perform the work shall be obtained by the Contractor at the Contractor's own cost and expense. Determining license and permit requirements shall be the responsibility of the Contractor.

1.05 SPILL PREVENTION:

- A. Any releases to the environment of tank contents or cleaning liquids shall be remediated by the Contractor as approved by the Commissioner at no cost to the City of New York. Spill prevention measures shall be fully described in the Spill Prevention and Control Plan as specified in the Contractor's approved Spill Prevention and Control Plan.

1.06 REMOVED MATERIAL:

- A. Except as otherwise set forth in these Specification or as limited by the Commissioner, all removed materials shall become the property of the Contractor who shall promptly remove them from the work Site and dispose of the same in accordance with Part 3 of this Section. Storage of removed material within the work Site shall not be permitted.

1.07 SUBMITTALS:

- A. Plan of Operations. A Plan of Operations shall be prepared and submitted to the Commissioner for approval within 15 days after the date of Notice to Proceed. The plan shall describe methods, equipment, and sequence of operations, including, but not limited to:
 - 1. Tank contents removal;
 - 2. Spill prevention;

3. Tank purging procedure;
4. Interior and exterior tank cleaning procedure;
5. Wastewater collection and disposal;
6. Anticipated use, recycling or disposal of contents
7. Generator Decommissioning Plan

Work shall not be started until the plan has been approved by the Commissioner.

- B. Waste Manifests - Copies of manifests required to transport any waste materials shall be furnished to the Commissioner not later than the day following their preparation.
- C. Documentation of Treatment or Disposal: Documentation of acceptance of waste materials by a facility legally permitted to treat or dispose of those materials shall be furnished to the Commissioner no later than 7 days following delivery of those materials to the facility.
- D. Letters of acceptance from the facility and haulers acknowledging agreement to accept the waste material shall be furnished to the Commissioner not more than 14 days before transporting any hazardous or toxic materials.

1.08 TANK DESCRIPTIONS:

- A. Locations: General locations of all tanks are shown on the Contract Drawings.
- B. Tank Contents: Tanks have been used for storage of petroleum products.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 TANK CONTENTS REMOVAL AND DISPOSAL:

- A. Salvageable Fuel Oil. All salvageable fuel oil shall become the property of the Contractor for beneficial use or disposal at no additional expense to the City of New York. The City of New York does not guarantee that any minimum quality of salvageable fuel will remain.
- B. Sludge Material. Temporary storage: Sludge shall be collected in new or reconditioned 55-gallon drums or roll-off containers. Drums or containers shall be sealed water-tight to prevent rain infiltration and leaking of sludge and stored on-site in such a manner that the contents will not spill or leak. Chemical sampling and analyses of sludge shall be conducted and paid for by the Contractor in accordance with environmental regulatory requirements, as approved by the

Commissioner. Analytical results shall be provided to the Commissioner as soon as possible after receipt of results. Drums or containers shall be labeled in accordance with federal and State Regulations.

- C. Contaminated Water. Contaminated water shall be collected in new or reconditioned 55-gallon drums or roll-off containers. Drums or containers shall be sealed water-tight to prevent infiltration and leaking of water. Drums or containers shall be stored on-site in such a manner that the contents will not spill or leak. Chemical sampling and analysis of the waste shall be conducted and paid for by the Contractor in accordance with environmental regulatory requirements, as approved by the Commissioner. Analytical results shall be provided to the Commissioner within five working days after receipt of results. Drums or containers shall be labeled in accordance with federal and State Regulations.
- D. Disposal. Sludge and contaminated water shall not be on-site for more than 30 days. Information and documentation requirements including any required sampling for transport, salvage, treatment or disposal shall be determined and provided by the Contractor. Sludge and contaminated water shall be disposed of in accordance with environmental regulatory requirements at no additional cost to the City of New York.

3.02 CLEANING OF TANK:

- A. The tank storage systems, including all tanks and piping, shall be purged of flammable vapors. Storage tanks shall be cleaned in accordance with API RP 2015. Steam shall not be used for either purging or cleaning a tank or other equipment. The Contractor shall provide the Commissioner with an Affidavit indicating that the tank has been purged of flammable vapors by a certified tank installer prior to removing, accessing, or tank cutting/disposal activities are performed. The Contractor shall comply with all OSHA requirements and regulations.

3.03 REMOVAL OF ABOVE GROUND STORAGE TANKS:

- A. The procedures for closing and removing the tanks shall include, but not be limited to the following:
 - 1. Remove all product that can be pumped out.
 - 2. Drain and flush piping into the tanks.
 - 3. Remove remaining liquid from the tanks.
 - 4. All piping and gauge lines, with the exception of the vent lines, shall be disconnected and removed, and all tank openings shall be capped.
 - 5. The tank storage systems, including all tanks and piping, shall be purged of flammable vapors as described in Section 3.02 above.
 - 6. The interior of the tanks shall be cleaned with a high pressure rinse.

7. The vent lines shall be removed.
8. The tanks shall be disassembled and properly disposed of by the Contractor.
9. All openings to the tanks including, but not limited to, fill boxes, vent lines and gauge boxes shall be filled with concrete flush with the finished surface.

3.04 REMOVAL OF EMERGENCY GENERATOR:

- A. The procedures for removing the emergency generator shall include but not be limited to the following:
 1. Disconnect electrical connections to generator system. All above grade conduits shall be cut flush with grade and permanently capped at a location as directed by the Commissioner's On-Site Representative in the field. All electrical wire from conduits to be closed in place shall be removed back to the electrical panels.
 2. Drain, collect and dispose of all lubricating oil, coolant and other fluids contained within the generator and generator enclosure.
 3. Remove and dispose of all batteries contained within the generator enclosure.
 4. Disassemble and properly dispose of the generator and all associated equipment.

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 02 71 00

WATER TREATMENT SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

- A. The Contractor shall provide and operate a water treatment system in accordance with the project specifications and drawings. The Contractor is responsible for collecting, treating and discharging of all water removed from excavations, pits, sumps, basins, basements, trenches and collected water from building decontamination, asbestos abatement and other activities necessary to perform the decontamination, abatement and demolition work. The Contractor may utilize a separate treatment system for treatment of water generated as part of the asbestos abatement work. The wastewater treatment system shall include, but not be limited to, settling tanks, filters and activated carbon units for treating wastewater prior to discharge to an on-site sanitary, storm, or combined sanitary/storm sewer manhole.

1.02 WORK SCOPE

- A. Contractor is responsible for design, supply, operation, and maintenance of a Wastewater Treatment Facility capable of treating wastewaters generated during the performance of Work. Sources of wastewater include:
1. Water from decontamination of building components, walls, structures and equipment.
 2. Water from the accumulation of precipitation within Work Area pits, sumps, basements, basins and trenches.
 3. Water previously accumulated in Work Area pits, sumps, basement, basins and trenches.
 4. Water from dewatering operations as necessary to conduct the work of the project.
 5. Water from breaches of water lines.
- B. The Contractor shall be responsible for the legal disposal of all water encountered during the Work. Collected water shall be treated onsite to achieve New York City Department of Environmental Protection (NYCDEP) discharge parameters prior to discharge to the sewer, using appropriate parameters for sanitary, storm, or combined systems, or removed from the site and disposed of at a NYSDEC approved facility. The Contractor shall obtain all necessary discharge permits and pay all fees and costs as required to discharge to the NYCDEP water system.
- C. The Contractor is responsible for cleaning and dismantlement of the Waste Water Treatment Facility upon completion of the work.

1.03 PROGRESS SUBMITTALS

- A. See the General Conditions.

- B. Shop Drawings: Contractor shall supply a drawing or system schematic of the proposed activated carbon water treatment system based on the minimum specifications provided within this Section.
- C. The Contractor's Project Work Plan is a pre-work submittal. The plan shall indicate the on-site treatment and disposal equipment to be provided, the locations of treatment and disposal facilities, a description of operations, monitoring and contingencies to meet NYCDEP's effluent requirements, project schedule, and a labor schedule.
- D. Two (2) copies each of metering and associated records.

1.04 QUALITY ASSURANCE

- A. Perform work of this Section in accordance with the guidelines established by the NYCDEP. The treatment and discharge requirements can be obtained from NYCDEP.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum 2 years documented experience.
- B. Operator: Personnel experienced and trained in the operation of the treatment equipment and processes that are utilized.

1.06 REGULATORY REQUIREMENTS

- A. Contractor will be responsible for obtaining the necessary NYCDEP approvals for the operation of the treatment facility and discharge of treated waters.

1.07 PRE-INSTALLATION MEETING

- A. The Contractor shall attend a project meeting to review the Work Plan and discuss the system installation and operation. The meeting shall be conducted prior to mobilization of water treatment system equipment to the project site.

1.08 EXISTING CONDITIONS

- A. Section 02 00 10 – Summary of Environmental and Incinerator Decommissioning Work.
- B. The Contractor shall furnish all labor, materials, equipment, tools and appurtenances required to separate sediment, solids, and residual wastes and place into the appropriate disposal containers (i.e., drums, vacuum boxes, and/or roll-off boxes) as procured by the Contractor, in coordination with the Commissioner; and treat and dispose of water collected during dewatering and cleaning operations and all waters listed in 1.01 A and 2.01 A of this Section.

- C. The Contractor is solely responsible for the proper sizing of all treatment system equipment as necessary for meeting discharge requirements. The Contractor shall provide additional equipment of treatment processes as required to meet the discharge requirements.
- D. Sampling and analysis of treated water will be the responsibility of the Contractor.
- E. Discharge from the treatment system will be in batches to a sanitary, storm, or combined sanitary/storm sewer manhole. It will be the responsibility of the Contractor to obtain all necessary approvals and pay all fees required for the treatment and discharge of treated waters from the appropriate regulatory agencies.

PART 2 - PRODUCTS

2.01 DESIGN REQUIREMENTS

- A. Separate wastewater storage tanks (insulated/heated) for:
 - 1. Water from decontamination of building components, walls, structures and equipment.
 - 2. Water from asbestos abatement activities.
 - 3. Water from the accumulation of precipitation within Work Area pits, sumps, basements, basins and trenches.
 - 4. Water previously accumulated in Work Area pits, sumps, basements, basins, and trenches.
 - 5. Water from dewatering operations as necessary to conduct the work of the project.
 - 6. Any other waters listed in 1.01 A of this Section.
- B. Wash waters from decontamination and asbestos abatement activities shall be treated and disposed in accordance with the Contractor's Project Work Plan, as approved by the Commissioner.
- C. The Contractor shall furnish all material, labor, equipment, PPE, and incidentals required to complete the Work, including, but not limited to, the following:
 - 1. Scope of Work.
 - a. The Contractor shall perform at minimum the following Scope of Work:
 - (i) Contractor shall be responsible for collecting and treating through an on-site treatment unit all water collected or generated as part of the Project. The treatment system will have, at a minimum: pre-treatment collection and settling tank; pre-treatment filtration system containing a series of increasingly smaller filters (i.e., 10 micron to 5 micron); two vessels in parallel containing activated carbon. For each sampling event, laboratory turnaround will be completed on a turnaround time necessary to maintain required operation of the system. Treated water will be discharged to an on-site

sanitary, storm, or combined sanitary/storm manhole and ultimately to the NYSDEP sewer system. The Contractors work plan shall show proposed locations for the treatment system staging area for review by the Commissioner. The Contractor is responsible for to design and size equipment to meet decontamination and dewatering needs.

- (ii) The Contractor shall be responsible for placing all sludge and solids into the appropriate disposal containers as procured by the Contractor. The Contractor will be responsible for sampling the materials for disposal characterization, making material characterization determinations and providing the laboratory data to the Commissioner. The Contractor will be responsible for scheduling procurement of appropriate disposal containers as well as transportation and disposal of the disposal containers once characterization of the contents and all paper work has been properly completed.
- (iii) The Contractor will be responsible for labeling all storage containers with the designated labels.
- (iv) The Contractor shall provide manpower to collect wipe samples associated with the decontamination of on-site fractionation tanks and other equipment (i.e., vacuum trucks, video equipment, etc.) used during the cleaning activities and on-site water treatment activities prior to demobilization from the site. The Contractor will be responsible for wipe sample analysis costs. The Contractor will provide a complete hard copy, (including at a minimum the chain of custody, laboratory results, methodology QC, and QC narrative) of the final analytical report to the Commissioner prior to removal of equipment from the site. Under NO circumstances shall any re-usable equipment (i.e., vacuum trucks, hoses, etc.) leave the Site without prior decontamination and authorization from the Commissioner.
- (v) Site-dedicated mobile tanker to transport wastewater to Wastewater Treatment and Storage Facility.
- (vi) Totalizing flow meter accurate to 0.5 percent. Contractor will provide the Commissioner with daily process and discharge volumes on a spreadsheet which will identify the source of the treated water, the date and time treated. The Contractor's operator shall verify that analytical results meet discharge criteria and supply the results and verification in the daily report to the Commissioner.

2.02 EQUIPMENT

- A. Due to the volume of wash waters that are to be generated over the duration of the project, the assembly of a modular holding tank or multiple holding tanks is required. It is the Contractor's responsibility to provide adequate storage capacity based on the project scope.

2.03 COMPONENTS

- A. Pretreatment Storage Tank(s)
- B. Pretreatment Bag Filtration System comprised of, at a minimum, a 10-micron filter and 5-micron filter.
- C. A dual canister activated carbon (GAC) unit connected in parallel with an "endpoint" sampling port located to monitor breakthrough.
- D. A sewer connection to the on-site sanitary, storm, or combined sanitary/storm sewer manhole.
- E. Other equipment as needed to meet NYCDEP approvals for the operation of the treatment facility and discharge of treated waters.

PART 3 - EXECUTION

3.01 PREPARATION

- A. The staging site for the treatment system will need to be properly prepared prior to assembly. It is the responsibility of the Contractor to inspect the staging area during the pre-construction meeting to assess conditions the staging needs.

3.03 INSTALLATION

- A. Install Wastewater Treatment and Storage Facility at a location acceptable to the Commissioner.

3.04 STORAGE FACILITY

- A. Place tanks above ground; heat and insulate, if necessary. Tanks shall be leak proof. Repair leaks that are found. Visually check tanks for leaks and repair on a daily basis. Repair or replace tanks that leak at no additional cost. Provide secondary containment for tanks and vessels as necessary for the materials being stored. Supply pipes, flanges, connections, and other appurtenances required to place wastewater in or remove wastewater from storage tanks. Tanks shall include float levels for monitoring levels and access manholes/portholes for decontamination of tanks and for sampling.

3.05 TREATMENT

- A. Treat collected wastewater and release acceptably treated wastewater to the NYCDEP approved sanitary, storm, or combined sanitary/storm sewer manhole only upon satisfactory testing

results. Under no circumstances shall the Contractor discharge waters without the receipt of analytical testing verifying discharge criteria has been achieved.

- B. Empty wastewater tanks and treated wastewater at a frequency required to maintain on project activities and to minimize the risk of exceeding the capacity of storage tanks due to heavy runoff.

3.06 OPERATION

- A. Do not operate Wastewater Treatment and Storage Facility until a NYS Licensed Engineer hired by the Contractor has inspected and certified the facility. The Contractor shall provide the Commissioner with documentation that an NYS Licensed Engineer has approved the facility.
- B. Operate Wastewater Treatment and Storage Facility and do all work necessary to treat collected wastewater on a periodic basis as required.
- C. The Wastewater Treatment System will be operated at a maximum flow rate of 100 gallons per minute or maximum flow rate allowed by NYCDEP.
- D. The Contractor shall sample the discharge after the first initial 1,000 gallons of water and additionally as required by NYCDEP to ensure compliance with discharge criteria. The Contractor shall provide a treated water storage tank as necessary to collect and test treated water prior to discharge to the sanitary, storm, or combined sanitary/storm sewer system.
- E. The Contractor shall remove and replace the carbon media as necessary to meet discharge criteria. Should effluent sampling indicate that the carbon is approaching "breakthrough," the Contractor shall be required to replace the carbon prior to any additional treatment of water. Contain removed carbon media in approved Contractor-supplied containers. Send spent carbon media and filter media off Site for thermal destruction or alternatively the granular activated carbon may be reactivated at an off-Site facility licensed to provide these services.

3.07 WASTE HANDLING

- A. Section 02 60 00 Contaminated Site Material and Waste Removal and Disposal.
- B. Handle wastes generated according to Federal, State, and local regulations.
- C. Label all drums and containers in accordance with RCRA and TSCA regulations.
- D. Contractor will perform waste characterization analyses in accordance with the Contractor's proposed disposal facility. The Contractor shall pay for all analytical costs necessary for waste characterization.
- E. Dispose of materials in accordance with Section 02 60 00.

3.08 SAMPLING AND ANALYSIS

- A. The Contractor will conduct all system effluent sampling and analysis activities unless otherwise specified. The Contractor shall pay for all analytical costs necessary for compliance testing of effluent.

END OF SECTION

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SECTION 02 80 13

ALLOWANCE FOR INCIDENTAL ASBESTOS ABATEMENT

1.01 SCOPE FOR ASBESTOS ABATEMENT WORK

- A. The "General Conditions" apply to the work of this Section.
- B. The Asbestos abatement contractor shall remove asbestos containing materials as needed to perform the other work of this Contract when discovered during the course of work. When required, the Asbestos abatement contractor shall replace the ACM with non-asbestos containing materials. An allowance of **\$250,000.00** for the **General Contractor** is herein established for this incidental work when so ordered and authorized by the Commissioner.
- C. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE RULES AND REGULATIONS OF THE ASBESTOS CONTROL PROGRAM AS PROMULGATED BY TITLE 15 CHAPTER 1 OF RCNY AND NEW YORK STATE DEPARTMENT OF LABOR INDUSTRIAL CODE RULE 56 CITED AS 12 NYCRR, PART 56 WHICHEVER IS MORE STRINGENT AS PER LATEST AMENDMENTS TO THESE LAWS AND AS MODIFIED HEREIN BY THESE SPECIFICATIONS.
- D. ALL DISPOSAL OF ASBESTOS CONTAMINATED MATERIAL SHALL BE PER LOCAL LAW 70/85.
- E. THE ASBESTOS ABATEMENT CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT CERTAIN METHODS OF ASBESTOS ABATEMENT ARE PROTECTED BY PATENTS. TO DATE, PATENTS HAVE BEEN ISSUED WITH RESPECT TO "NEGATIVE PRESSURE ENCLOSURE" OR "NEGATIVE-AIR" OR "REDUCED PRESSURE" AND "GLOVE BAG".
- F. THE ASBESTOS ABATEMENT CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND SHALL HOLD THE DEPARTMENT OF DESIGN AND CONSTRUCTION AND THE CITY HARMLESS FROM ANY AND ALL DAMAGES, LOSSES AND EXPENSES RESULTING FROM ANY INFRINGEMENT BY THE ASBESTOS ABATEMENT CONTRACTOR OF ANY PATENT, INCLUDING BUT NOT LIMITED TO THE PATENTS DESCRIBED ABOVE, USED BY THE ASBESTOS ABATEMENT CONTRACTOR DURING PERFORMANCE OF THIS AGREEMENT.
- G. "Asbestos" shall mean any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthrophyllite and actinolite.
- H. Prior to starting, the Asbestos abatement contractor must notify the Commissioner of the Department of Design and Construction if he/she anticipates any difficulty in performing the Work as required by these Specifications. The Asbestos abatement contractor is responsible to prepare and submit all filings, notifications, etc. required by all City, State and Federal regulatory agencies having jurisdiction.

The Asbestos abatement contractor is responsible for submitting the Asbestos Project Notification Form (ACP-7 Form) to the Department of Environmental Protection, Asbestos Control Program, as per Title 15, Chapter I of RCNY and to the NYSDOL as per Industrial Code Rule 56.

The Asbestos abatement contractor is responsible for preparing, and submitting Asbestos Variance Application (ACP-9). If a Variance is required, the Asbestos abatement contractor is responsible to retain a NYSDOL Asbestos Project Designer, as defined in Title 15, Chapter 1 of the RCNY to prepare and submit the required variance.

The General contractor is responsible for preparing and submitting an Asbestos Abatement Permit and/or Work Place Safety Plans (WPSP) that may be required for the completion of the Contract or incidental work. If such plans are required, the Asbestos abatement contractor is responsible to retain a NYSDOL Licensed Design Professional as defined in Title 15, Chapter 1 of the RCNY to prepare and submit the required plans.

The Asbestos abatement contractor is responsible for the submission of all required documents to the NYCDEP to acquire the appropriate Asbestos Project Conditional Closeout (ACP-20) and/or Asbestos Project Completion Forms (ACP-21) on a timely basis for the completion of the incidental work encountered under this contract.

The Asbestos abatement contractor will be required to attend an on-site job meeting with the Construction Project Manager prior to the start of work to examine conditions and plan the sequence of operations, etc.

The Asbestos abatement contractor shall have a NYSDOL/NYCDEP Asbestos Supervisor onsite to oversee the work and conduct a final visual inspection as required by both Title 15, Chapter 1 of the RCNY and NYSDOL Industrial Code Rule 56.

- I. All work shall be done during regular working hours unless the Asbestos abatement contractor requests authorization to work in other than regular working hours and such authorization is granted by the Commissioner. (Regular work hours are those hours during which any given facility, in which work is to be done, is customarily open and functioning, normally between the hours of 8:00 A.M. and 4:00 P.M. Monday - Friday.) If such work schedule is authorized by the Commissioner, the work shall be done at no additional cost to the City.
- J. The Commissioner may order that work be done in other than regular working hours as herein by defined and this order may require the Asbestos abatement contractor to pay premium or overtime wages to complete the work. If the Commissioner orders work in other than regular working hours, the Asbestos abatement contractor shall multiply the unit price for that portion of the work requiring premium wages by 1.50 when computing payment in accordance with Paragraph 1.09. All requests for premium payment must be supported by certified payroll sheets and field sheets approved by the Construction Project Manager.

1.02 QUALIFICATIONS OF ASBESTOS ABATEMENT CONTRACTOR

- A. Requirements: The asbestos abatement contractor must demonstrate compliance with the special experience requirements set forth in subparagraphs (1) through (5) below. The asbestos abatement contractor must, submit documentation demonstrating compliance with all listed requirements. Such documentation shall include without limitation, all required licenses, certificates, and documentation.
1. The asbestos abatement contractor must, whether an individual, corporation, partnership, joint venture or other legal entity, must demonstrate for the three year period prior to the work, that it has been licensed by the New York State Department of Labor, as an "Asbestos abatement contractor".
 2. The asbestos abatement contractor must, for the three year period prior to the work, have been in the business of providing asbestos abatement services as a routine part of its daily operations.
 3. The asbestos abatement contractor proposing to do asbestos abatement work must be thoroughly experienced in such work and must provide evidence of having successfully performed and completed in a timely fashion at least five (5) asbestos abatement projects of similar size and complexity. The aggregate cost of these projects must be at least \$250,000.00 in each of the three years.
 4. For each project submitted to meet the experience requirements set forth above, the asbestos abatement contractor must submit the following information for the project; name and location of the project; name title and telephone number of the owner or the owner's representative who is familiar with the asbestos abatement contractor's work, brief description of the work completed as a prime or sub-asbestos abatement contractor; amount of contract or subcontract and the date of completion.
 5. The asbestos abatement contractor must demonstrate that it has the financial resources, supervisory personnel and equipment necessary to carry out the work and to comply with the required performance schedule, taking into consideration other business commitments. The asbestos abatement contractor must submit such documentation as may be required by the Department of Design and Construction to demonstrate that it has the requisite capacity to perform the required services of this contract.
- B. Insurance Requirements: The asbestos abatement contractor must provide asbestos liability insurance in the following amount: 1 million dollars per occurrence, 2 million dollars aggregate (combined single limit). The City of New York shall be named as an additional insured on such insurance policy.
- C. Throughout the specifications, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics thereof.

1.03 ASBESTOS ABATEMENT CONTRACTOR RESPONSIBILITIES

The Asbestos abatement contractor will visit the subject location within one (1) working day of notification to ascertain actual work required. If the project is identified as being "urgent", then work shall commence no later than 48 hours from the time of notification. In this event, the asbestos abatement contractor shall immediately notify when applicable EPA NESHAPS Coordinator, NYSDOL Asbestos Control Bureau and NYCDEP Asbestos Control Program of start of the work and file the necessary Asbestos Notifications and any applicable Variance Applications with the regulatory agencies cited above..

In the event that the project is not classified as "urgent" the Asbestos abatement contractor shall notify the EPA NESHAPS Coordinator, NYSDOL and NYCDEP by submitting the requisite asbestos project notification forms, postmarked 10 days before activity begins if 260 linear feet or more and/or 160 square feet or more of asbestos containing material will be disturbed.

The following information must be included in the notification:

- A. Name and address of building City or operator;
- B. Project description:
 - 1. Size - square feet, number of linear feet, etc.;
 - 2. Age - date of construction and renovations (if known);
 - 3. Use - i.e., office, school, industrial, etc.
 - 4. Scope - repair, demolition, cleaning, etc.
- C. Amount of asbestos involved in work and an explanation of techniques used to determine the amount;
- D. Building location/address, including Block and Lot numbers;
- E. Work schedule including the starting and completion dates;
- F. Abatement methods to be employed;
- G. Procedures for removal of asbestos-containing material;
- H. Name, title and authority of governmental representative sponsoring project.

1.04 WORK INCLUDED IN UNIT PRICE

The Asbestos abatement contractor will be paid a basic unit price of **\$25.00** per square feet for the removal and disposal of asbestos containing material and replacement of the same with non-asbestos containing materials.

Unit price shall include all costs necessary to do the work of this Contract, including but not limited to: labor, materials, equipment, utilities, disposal, insurance, overhead and profit.

1.05 AIR MONITORING – ASBESTOS ABATEMENT CONTRACTOR

- A. "Air Sampling" shall mean the process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure utilized for asbestos follows the NIOSH Standard Analytical Method 7400 or the provisional transmission electron microscopy methods developed by the USEPA and/or National Institute of Standard and Technology which are utilized for lower detectability and specific fiber identification.
- B. Air monitoring of Asbestos abatement contractor's personnel will be performed in conformance with OSHA requirements, (All costs associated with this work are deemed included in the unit price.).
- C. Qualifications of Testing Laboratory:

The industrial hygiene laboratory shall be a current proficient participant in the American Industrial Hygiene Association (AIHA) PAT Program. The laboratory identification number shall be submitted and approved by the City. The laboratory shall be accredited by the AIHA and New York State Department of Health Environmental Laboratory Approval Program (ELAP).

Note: Work area air testing and analysis before, during and upon completion of work (clearance testing) will be performed by a Third Party Air Monitor under separate Contract with the City.

1.06 THIRD PARTY MONITORING AND LABORATORY

- A. The NYCDDC, at its own expense, will employ the services of an independent Third Party Air Monitoring Firm and Laboratory. The Third Party Air Monitor will perform air sampling activities and project monitoring at the Work Site.
- B. The Laboratory will perform analysis of air samples utilizing Phase Contrast Microscopy (PCM) and/or Transmission Electron Microscopy (TEM).
- C. The Third Party Air Monitoring Firm and the designated Project Monitor shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the Asbestos abatement contractor to verify that said performance complies with this Specification. The Third-Party Air Monitor shall be on site throughout the entire abatement operation.
- D. The NYCDDC will be responsible for costs incurred with the Third Party Air Monitoring Firm and laboratory work. Any subsequent additional testing required due to limits exceeded during initial testing shall be paid for by the Asbestos abatement contractor.

1.07 PAYMENT REQUEST DOCUMENTATION

A. The following information shall be included for each payment request:

1. Description of work performed.
2. Linear footage and pipe sizes involved.
3. Square footage for boiler & breaching insulation removed.
4. Square footage of non-pipe and boiler areas removed, patched, enclosed, sealed, or painted.
5. Square footage of encapsulation, sealing, patching, and painting involved.
6. Total cost associated with compliance with the assigned task.
7. Architectural, Electrical, HVAC, Plumbing, etc. work incidental to the Asbestos Abatement Work.
8. A certified copy (in form 4312-39) to the Comptroller or Financial Officer of the New York City to the effect that the financial statement is true.
9. A signed copy (in form 6506q-6) of certificate of compliance with non-discriminatory provisions of the Contract.
10. Attach a copy of valid workmen compensation insurance.
11. Valid asbestos insurance per occurrence.
12. General liability insurance when required.

B. Each payment request shall include a grand total for all work completed that billing period, the landfill waste manifests and a copy of waste transporter permit. The Department of Design and Construction will inspect the work performed, review the cost and approve or disapprove requests for payment.

C. EXPOSURE LOG: With this final payment, the Asbestos abatement contractor shall submit a listing of the names and social security numbers of all employees actively engaged in the abatement work of this Contract. This list shall include a summary showing each part of the abatement work in which the employee was engaged and the dates thereof.

1.08 QUANTITY CALCULATIONS

A. In order to determine the square footage involved for the various pipe sizes of pipe insulation that might be encountered, the following table is to be used.

PIPE INSULATION SIZE O.D.	PIPE SIZE O.D.	SQUARE FOOTAGE PER LINEAR FOOT
2-1/2"	1/2"	0.65
2-3/4"	3/4"	0.72
3"	1"	0.79
3-1/4"	1-1/4"	0.85
3-1/2"	1-1/2"	0.92
4"	2"	1.05
4-1/2"	2-1/2"	1.18
5"	3"	1.31
6"	3-1/4"	1.57
7"	3-1/2"	1.83
8"	4"	2.09
9"	5"	2.36
10"	6"	2.62
12"	8"	3.14
14"	10"	3.67
16"	12"	4.19
18"	14"	4.71

1.09 METHOD OF PAYMENT

Payment shall be made in accordance with Items A through R below. Payment shall be calculated based on the actual quantity of the item performed by the asbestos abatement contractor, times the unit price specified below. Credits may apply to certain times, as specified below.

A. REMOVAL, DISPOSAL AND REPLACEMENT OF ASBESTOS CONTAINING PIPE INSULATION:

Actual linear footage, multiplied by the square footage factor listed for the respective pipe size in Section 1.09, multiplied by the unit price in Section 1.05.

EXAMPLE: 100 lin.ft. of 1/2" pipe and 100 lin.ft. of 6" pipe, including elbows, tees, Flanges, etc.

$$100 \times 0.65 = 65 \text{ sq.ft. } 65 \times \text{unit price} = \text{Payment}$$

$$100 \times 2.62 = 262 \text{ sq.ft. } 262 \times \text{unit price} = \text{Payment}$$

B. REMOVAL, DISPOSAL AND REPLACEMENT OF BOILER INSULATION: (all types including Silicate Block and including the removal/replacement of metal jacketing) Payment shall be made at 1.5 times the unit price per square foot.

EXAMPLE: Item B. removal and replacement of 1000 S.F. of boiler insulation (incl. Silicate block)

$$1000 \text{ S.F.} \times (1.5) \times \text{the Unit Price} = \text{Payment}$$

- C. **REMOVAL, DISPOSAL AND REPLACEMENT OF TANK INSULATION:** (all types including removal/replacement of metal jacketing) Payment shall be made at 1.5 times the unit price per square foot.
- D. **REMOVAL, DISPOSAL AND REPLACEMENT OF BOILER UPTAKE, & BREACHING INSULATION:** (all types including stiffening angles and wire lath) Payment shall be made at 2.0 times the unit price per square foot.
- E. **REMOVAL, DISPOSAL AND REPLACEMENT OF DUCT INSULATION:** Payment shall be made at 1.0 times the unit price per square foot.
- F. **REMOVAL, DISPOSAL AND REPLACEMENT OF SOFT ASBESTOS CONTAINING MATERIAL:** (Including sprayed-on fire proofing and sound proofing) Payment shall be made at 1.0 times the unit price per square foot of surface area. Area of irregular surfaces must be calculated and confirmed with DDC representative.
- G. **ACOUSTIC PLASTER REPAIR AND/OR ENCAPSULATION:** Payment shall be made at 0.5 times the unit price per square foot.
- H. **PATCHING OR REPAIR** of items listed in A through F will be paid at 0.33 times the unit price per square foot.
- I. **REMOVAL, DISPOSAL AND REPLACEMENT OF WATERPROOFING ASBESTOS CONTAINING MATERIAL:** (including friable and non-friable waterproofing material from interior and exterior walls, floors, foundations, penetrations, louvers, vents and openings other than windows, doors and skylights) Payment shall be made at 0.5 times the unit price per square foot.
- J. **REMOVAL, DISPOSAL AND REPLACEMENT OF ASBESTOS CONTAINING ELECTRICAL WIRING INSULATION:** (including friable and non-friable wiring insulation) Payment shall be made at 0.33 times the unit price per square foot.
- K. **PAINTING:** Payment shall be made at 0.05 times the unit price per square foot.
- L. **REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING PLASTER:** from ceilings and walls, including any wire lath and disposal as asbestos containing waste. Payment shall be made at 0.80 times the unit price per square foot.
- M. **REMOVAL AND DISPOSAL OF ASBESTOS-CONTAINING FLOOR TILES, CEILING TILES, TRANSITE PANELS:** (including any adhesive, glue, mastic and/or underlayment) and disposal as asbestos containing waste. Payment shall be made at 0.40 times the unit price per square foot. If multiple layers are discovered, each additional layer shall be paid at 0.20 times the unit price per square foot.
- N. **ADDITIONAL CLEAN UP/HOUSEKEEPING OF WORK AREA:** (excluding pre-cleaning of work area required by regulations) HEPA vacuuming and wet cleaning of asbestos contaminated surface. Payment shall be made at 0.20 times the unit price per square foot. When GLOVE BAG is employed to remove ACM, cost of HEPA vacuuming and wet

cleaning of floor area up to 3 feet on each side of glove-bag shall be included in unit price and no extra payment will be made.

- O. **REMOVAL, DISPOSAL OF ASBESTOS-CONTAINING ROOFING MATERIAL:** including mastic, flashing and sealant compound and provide temporary asbestos-free roof covering consisting of one layer of rolled roofing paper sealed with asphaltic roofing compound. Payment shall be made at 0.8 times the unit price per square foot. Credit at a rate of 0.33 times the unit price will be taken for each square foot of temporary roof covering which the Asbestos abatement contractor is directed not to install.
- P. **PICK-UP AND DISPOSAL OF GROSS DEBRIS:** (excluding any waste generated from abatement under Item A-R) at a rate of \$150 per cubic yard for asbestos contaminated waste and \$75 per cubic yard for non-asbestos contaminated waste. This cost includes all labor and material cost associated with work.
- Q. **REMOVAL OF ASBESTOS-CONTAINING BRICK, BLOCK, MORTAR, CEMENT OR CONCRETE:** along with all surfacing materials including wire lath and/or other supporting structures and disposal as ACM waste. Payment shall be made at a rate of \$25.00 per cubic foot of material removed.
- R. **REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING WINDOW/DOOR CAULKING:** including friable and non-friable caulking, weather-stripping, glazing, sealants or other waterproofing materials applied to windows, doors, skylights, etc. Payment shall be made at the rate of \$400.00 per opening regardless of size or configuration. This cost includes labor, consumable materials, set-up/breakdown, removal and disposal, as required.

Note 1: CREDIT: For items listed in A through F, a credit at a rate of 0.33 times the unit price, times the respective multiplier (for each item) will be taken for each square foot of insulation which the asbestos abatement contractor is not directed to reapply.

Note 2: MINIMUM PAYMENT: The minimum payment per call at any individual job sites or various job sites during the same day will be eight hundred dollars (\$800.00).

Note 3: All payments shall be made as described in paragraph 1.09 herein.

Note 4: WORKING HIGHER THAN 12 FEET ABOVE FLOOR LEVEL OR WORK REQUIRING COMPLEX SCAFFOLDING OR CONSTRUCTION WORK PLATFORMS: Provisions are made in this Contract to compensate the Asbestos abatement contractor for work performed in locations that are difficult to access due to work at elevations that are significantly higher than the normal work level. The unit price for these items will be paid at 1.20 times the unit price described in Paragraphs 1.09, A through R for those portions of the work that are more than twelve (12) feet above the grade for that would be judged as the normal working level.

1.10 GUARANTEE

- A. Work performed in compliance with each task shall be guaranteed for a period of one year from the date the completed work is accepted by the Department of Design and Construction.
- B. The Commissioner of The Department of Design and Construction will notify the Asbestos abatement contractor in writing regarding defects in work under the guarantee.

1.11 OCCUPANCY OF SITE NOT EXCLUSIVE

- A. Attention is specifically drawn to the fact that contractors, performing the work of other Contracts, may be brought upon any of the work sites of this Contract. Therefore, the Asbestos abatement contractor shall not have exclusive rights to any site of his work and shall fully cooperate and coordinate his work with the work of other contractors who may be brought upon any site of the work of this Contract. This paragraph applies to those areas outside the regulated Work Area as defined by Title 15, Chapter I of RCNY.

1.12 SUBMITTALS

- A. Pre-Construction Submittals:
 - 1. Attend a pre-construction meeting scheduled by the City of New York Department of Design and Construction. This meeting shall also be attended by a designated representative of the City of New York third party air monitoring firm, facility manager and the Construction Project Manager. At this meeting, the Asbestos abatement contractor shall present three copies of the following items:
 - a. Asbestos abatement contractor's scope of work, work plan and schedule.
 - b. Asbestos project notifications, approved variances and plans to Government Agencies.
 - c. Copies of Permits, clearance and licenses if required.
 - d. Schedules: the Asbestos abatement contractor shall provide to the Construction Project Manager a copy of the following schedules for approval. Once approved, schedules shall be maintained and updated as received. Asbestos abatement contractor shall post a copy of all schedules at the site:
 - (1) A construction schedule stating critical dates of the project including, but not limited to, mobilization, Work Area preparation, demolition, gross removal, fine cleaning, encapsulation, inspections, clearance monitoring, and phase of refinishing and

final inspections. The schedule shall be updated biweekly, at a minimum.

- (2) A schedule of staffing stating number of workers per shift per activity, name and number of supervisor(s) per shift, shifts per day, and total days to be worked.
 - (3) Submit all changes in schedule or staffing to the Construction Project Manager prior to implementation.
- e. Written description of emergency procedures to be followed in case of injury or fire. This section must include evacuation procedures, source of medical assistance (name and telephone number to nearest hospital) and procedures to be used for access by medical personnel (examples: first aid squad and physician). NOTE: Necessary Emergency Procedures Shall Take Priority Over All Other Requirements of These Specifications.
- f. 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.
- g. Worker Training and Medical Surveillance: The Asbestos abatement contractor shall submit a list of the persons who will be employed by him /her to perform the removal work. Present evidence that workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.
- h. Logs: Specimen copies of daily progress log, visitor's log, and disposal log.
- (1) The Asbestos abatement contractor shall provide a permanently bound log book of minimum 8-1/2" x 11" size at the entrance to the Worker and Waste Decontamination enclosure system as hereinafter specified. Log book shall contain on title page the project name, name, address and phone number of the Asbestos abatement contractor; name, address and phone number of Asbestos abatement contractor and City's third party air monitoring firm; emergency numbers including, but not limited to local Fire/Rescue Department. Log book shall contain a list of personnel approved for entry into the Work Area.
 - (2) All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted. Any significant events occurring during the abatement project shall be entered

into the log. Upon completion of the job, the Asbestos abatement contractor shall submit the logbook containing a day-to-day record of personnel log entries countersigned by the Construction Project Manager every day.

- i. Worker's Acknowledgments: Submit statements signed by each employee that the employee has received training in the proper handling of ACM, understands the health implications and risks involved; and understands the use and limitations of the respiratory equipment to be used.

B. During Construction Submittals:

1. Security and safety logs showing names of person entering workspace, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.
2. Progress logs showing the number of workers, supervisors, hours of work and tasks completed shall be submitted daily to the Construction Project Manager.
3. Floor plans indicating Asbestos abatement contractor's current work progress shall be submitted for review by the Construction Project Manager.
4. All Asbestos abatement contractors' air monitoring and inspection results.

C. Project Closeout Submittals:

Upon completion of the project and as a condition of acceptance, the Asbestos abatement contractor shall present two copies of the following items, bound and indexed:

1. Lien Waivers from Asbestos abatement contractor, Sub-Asbestos abatement contractors and Suppliers,
2. Daily OSHA air monitoring results,
3. All Waste Manifests (Asbestos and Construction Debris), seals and disposal logs,
4. Field Sign-In/Sign-Out Logs for every shift,
5. Copies of all Building Department Forms and Permits,
6. A Letter of Compliance stating that all the work on this project was performed in accordance with the Specifications and all applicable Federal, State and Local regulations,
7. All Warranties as stated in the Specifications,
 - a. Fully executed disposal certificates and transportation manifest.

8. Project Record: The Asbestos abatement contractor shall maintain a project record for all small and large asbestos projects. During the project, the project record shall be kept on site at all times. Upon completion of the project, the project record shall be maintained by the building owner. The project record shall be submitted to DDC as part of the close out documents. The project record shall consist of:
 - a. Copies of licenses of all asbestos abatement contractors involved in the project;
 - b. Copies of NYCDEP and NYSDOL supervisor and handler certificates for all workers engaged in the project;
 - c. Copies of all project notifications and reports filed with NYCDEP, NYSDOL and USEPA for the project, with any amendments or variances;
 - d. Copies of all asbestos abatement permits, including associated approved plans and work place safety plan;
 - e. A copy of the air sampling log and all air sampling results;
 - f. A copy of the abatement asbestos abatement contractor's daily log book;
 - g. Copies of all asbestos waste manifests;
 - h. A copy of all Project Monitor's Reports (ACP-15).
 - i. A copy of each ATR-1 Form completed for the asbestos project (if required).
 - j. A copy of each Asbestos Project Conditional Closeout Report (ACP-20) if required.
 - k. A copy of the Asbestos Project Completion Form (ACP-21).

1.13 PROTECTION OF FURNITURE AND EQUIPMENT

Cover all furniture and equipment that cannot be removed from Work Areas. Movable furniture and equipment will be removed from Work Areas by the Asbestos abatement contractor prior to start of work. At the conclusion of the work (after final air testing), the Asbestos abatement contractor will remove all plastic covering on walls, floors, furniture, equipment and reinstall furniture and equipment. He shall remove and store all sheaths, curtains and drapes, and reinstall same following final clean up.

1.14 UTILITIES

A. General:

All temporary facilities shall be subject to the approval of the Commissioner. Prior to starting work at any site, locations and/or sketches (if required) of temporary facilities must be submitted to the Construction Project Manager for the required approval.

B. Water:

The Department of Design and Construction will furnish all water needed for construction, at no cost to the Asbestos abatement contractor in buildings under their jurisdiction. However, it is the responsibility of the Asbestos abatement contractor to ensure that hot water is provided for showering in the decontamination unit. The Asbestos abatement contractor shall furnish, install and maintain any needed equipment to meet these requirements at his own expense.

C. Electricity:

The Department of Design and Construction will furnish all electricity needed for construction, at no cost to the Asbestos abatement contractor in a building, under their jurisdiction. The Asbestos abatement contractor is responsible for routing the electric power to the abatement Work Area.

All temporary lighting and temporary electrical service for Work Area shall be in weatherproof enclosures and be ground fault protected.

D. In leased spaces, arrangements for water supplies and electricity must be made with the landlord. However, all such arrangements must be made through and are subject to approval of the Department of Design and Construction. Utilities will be provided at no cost to the Asbestos abatement contractor. However, it is the Asbestos abatement contractor's (or the General contractor's) responsibility to furnish and install a suitable distribution system to the Work Area. This system will be provided at no cost to the City.

1.15 FEES

The Asbestos abatement contractor shall be responsible for any and all fees or charges imposed by Local, State or Federal Law, Rule and Regulation applicable to the work specified herein, including fees or charges which may be imposed subsequent to the date of the Bid opening.

END OF SECTION

SECTION 02 81 20

REMOVAL AND DISPOSAL OF HEAVY METALS CONTAINING MATERIAL

PART 1 - GENERAL

1.01 SCOPE:

- A. The contractor shall perform all work necessary to carry out the proper removal and disposal of all ash, dust, debris and brick from the Sealed Incinerator Rooms and mercury containing lights and electrical equipment in accordance with all applicable laws, codes, rules and regulations and in accordance with the requirements set forth in this section. Mercury bearing electrical equipment is located in various areas of the Site.
- B. The contractor shall perform all work necessary to carry out the proper removal and disposal of all ash, dust, debris and brick (which is contaminated with various heavy metals i.e., lead and cadmium) in accordance with all applicable laws, codes, rules and regulations and in accordance with the requirements set forth in this section. Areas of accumulated ash, dust, debris and residue are located throughout the Sealed Incinerator Rooms. Based on analytical results, all ash and residue shall be handled and disposed of as a RCRA metals contaminated hazardous waste. Also, refractory brick shall be disposed of as RCRA metals contaminated hazardous waste. The Contractor shall remove and dispose of the brick and insulating materials in the Sealed Incinerator Rooms as RCRA hazardous and asbestos waste unless proper metals/asbestos testing determine otherwise. In addition, any equipment and other miscellaneous materials removed from the Sealed Incinerator Rooms work areas which are not decontaminated to regulatory/specification required levels must be handled and disposed of as RCRA hazardous and asbestos contaminated wastes.
- C. The Contractor's use of a subcontractor shall not relieve the Contractor of full responsibility for the work to be performed.
- D. The Contractor's metals containing waste and mercury bearing equipment removal protocols must be documented in the Demolition Work Plan and submitted for Commissioner's approval prior to starting work.

1.02 REGULATORY REQUIREMENTS:

- A. Applicable guidelines and standards listed in this Scope of Work include, but are not limited to, the following:
 - 1. New York State Department of Environmental Conservation
6 NYCRR Subparts 360-3 and 371-376

2. Code of Federal Regulations (CFR) Publications:
 - a. 29 CFR, Part 1926.62 Lead Exposure in Construction; Interim Final Rule Vol. 58, No. 84
 - b. 29 CFR, Part 1910.120 Hazardous Waste Operations and Emergency Response
 - c. 40 CFR 61, Subpart A General Provisions (Hazardous Air Pollutants Listing)
 - d. 40 CFR 61.152 Standard for Waste Manufacturing, Demolition, Renovation, Spraying and Fabricating Operations
 - e. 40 CFR 241 Guidelines for the Land Disposal of Solid Wastes
 - f. 40 CFR 257 Criteria for Classification of Solid Waste
 - g. 40 CFR 281 Identification and Listing of Hazardous Wastes
 - h. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
3. American National Standards Institute (ANSI) Publications:
 - a. Z88.2-80 Practices for Respiratory Protection
 - b. Z87.1 Eye Protection

1.03 WORKER PROTECTION:

A. General

1. The Sealed Incinerator Rooms brick surface contains elevated levels of lead and cadmium and should be managed as hazardous waste.
2. The Contractor shall be responsible for maintaining a program in accordance with 29 CFR 1926.62 and 29 CFR 1910.120 at minimum and shall be responsible for protecting and training his employees on worker safety, health hazards, etc. relating to lead and hazardous wastes. The following sections must be addressed by the Contractor in a project health and safety program. This program shall be incorporated into the Contractor's written safety plan. These sections are not intended to constitute an exhaustive summary of all relevant obligations. The Contractor should consult the following publications and/or competent environmental counsel.

OSHA - 3079 Respiratory Protection

OSHA - 3142 Lead in Construction
3. Metallic mercury is known to be present in mercury lights and switchgear tubes at the Site. This standard applies to any other mercury found to be present at the facility.

B. Exposure Assessment

1. Exposure assessment is the primary means of determining to what airborne level of lead and cadmium that workers are being exposed to from ash, dust, debris, and brick. The Contractor shall insure that workers are not exposed to lead at concentrations greater than the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) over an eight-hour time weighted average (TWA) or cadmium at concentrations greater than $0.005 \mu\text{g}/\text{m}^3$. The Contractor must initially determine if any employee is exposed to these metals at or above the PEL. Until the findings of this initial exposure assessment indicate that the airborne concentrations do not exceed the PEL, the Contractor must provide respirator protection that shall adequately prevent worker exposure to airborne lead above the PEL. At a minimum, respirators must have a protection factor of at least ten. The Contractor must make this initial exposure assessment by personal air sampling representative of a full shift, including at least one sample for each job classification in each work area, either for each shift or for the shift with the highest exposure level.
2. If available, use exposure assessment data obtained within the last 12 months from previous jobs conducted under similar work conditions, control methods, work practices, and environmental conditions to be used in this contract or other objective data to demonstrate that work activities in this contract shall not exceed the PEL, provided that the assessment entailed comparable lead concentrations in coating materials, work practices, engineering controls, and rates of work.
3. Until the exposure assessment is performed, the Contractor must provide to his workers the following: respiratory protection with a protection factor of at least ten, personal protective clothing, change areas, shower facilities, biological monitoring and training.

C. Medical Surveillance

1. Provide medical surveillance to workers until exposure monitoring reveals that workers are not exposed on any day of the job to airborne lead at or above the Action Level of $30 \mu\text{g}/\text{m}^3$. This consists of a blood test measuring the level of lead and zinc protoporphyrin by a licensed physician. Further testing and medical exams may be necessary depending on the results of initial blood tests and/or the initial exposure assessment as stated in CFR 1926.62 and 29CFR 1926.1127.

D. Training

1. Before workers start a job in a hazardous waste environment, they must receive training as per OSHA requirements and 29 CFR 1910.120. This training must

include a description of the OSHA exposure standards, the sources of exposure, the uses and limitations of respirators, the purpose of blood testing, the purpose of the initial exposure assessment, their rights to the results of the blood tests and air monitoring and the methods of controlling the level of exposure to a minimum.

E. Written Program

1. Have a written health and safety program which is to be submitted to the Commissioner for written approval and imposed on all of his employees involved in operations that disturb or remove metals contaminated ash for this contract. The program, at a minimum, shall address respirator protection that is in full compliance with all aspects of 29 CFR 1910.134, exposure assessment, signs to be posted in work areas, protective clothing, engineering and administrative controls, hygiene facilities and practices, decontamination, housekeeping, medical surveillance, training and other items to satisfy OSHA standards as required.

F. Respirator Protection

1. Have a respirator protection program in accordance with 29 CFR 1910.134. If respirators are necessary, the Contractor shall have his employees medically approved to wear respirators, establish and submit a written respirator program, select the proper respirator for the level of exposure to be encountered on the job, and have workers fit-tested to insure proper fit.
2. The minimum respiratory protection requirements for ash clean-up operations and for the disturbance of any other lead containing material for this contract shall be as per 29 CFR 1926.62 which includes job categories and functions where workers may be exposed to lead.
3. All workers are required to don an appropriate level of protection commensurate with the airborne concentrations of lead and cadmium in which they are working. The level of protection shall be determined by the Contractor, based on objective air monitoring data.

G. Controlling Metals Exposure

1. Engineering and work practice controls are the primary means of maintaining exposures to metals below the PEL. Ash cleaning/removal activities must keep dust level at a minimum. Power tools must be equipped with vacuum shrouds with high efficiency particulate air filters (HEPA). Eating and drinking must be prohibited in the work area. Hand washing facilities must be provided. All personal protective clothing shall be removed at the end of the day.

H. Metals Monitoring

1. Documentation monitoring shall be conducted by the Contractor or the Contractor's air monitoring consultant as specified in Section 02 00 20.

1.04 ASH, DUST, DEBRIS AND BRICK CLEAN-UP:

A. General

Ensure that work plans and work methods utilized for ash, dust, debris, and brick clean-up conform to all applicable laws, codes, rules and regulations, including, without limitation New York City Department of Health regulations for Lead Exposure in Construction, federal statutes governing lead Exposure Reduction, 15 U.S.C.A. Section 2681 et. seq., and OSHA regulation 29 CFR, Part 1926.62; Lead Exposure in Construction, Interim Final Rule.

B. Work Plans

1. The Contractor shall be required to prepare task specific Work Plans prior to starting Work detailing how he shall accomplish each task of work related to the disturbance of any metals contaminated material. In each case the Contractor shall prepare the work plan with the needs, logistics and constraints of the individual job in mind, taking into account such factors as ash removal method, worker safety, proximity to the public, protection of the environment including containment and air monitoring requirements.
2. The Work Plans shall also include methods of minimizing and containing the generation of all dust, including dust generated while cleaning up construction and demolition debris. These methods may include such techniques as wet mopping and/or wiping, HEPA vacuuming or the use of a negative pressure ventilation system where lead dust is generated. Once the Work has been complete and debris has been properly removed from the site, all surfaces shall be free and clear of visible ash and dust. All work areas shall be cleaned on a daily basis at the end of each shift.
3. At no time shall the Contractor be permitted to perform any Work which may impact upon lead or cadmium containing material until authorization of the work plan has been approved and notification is given to the Commissioner.

1.05 MERCURY REMOVAL:

A. General

1. Ensure that work plans and work methods utilized for mercury removal conform to all applicable laws, codes, rules and regulations.

2. Contractor is required to remove mercury remaining in lighting systems and switchgear tubes and place into a designated sealable, labeled, plastic container. Any sludge or buildup on the inside of the mercury-bearing equipment should also be placed in a similar container for disposal or, alternatively, the entire piece of equipment may be disposed of appropriately. All fluorescent bulbs which may contain mercury must also be containerized and disposed of properly.
- B. Worker Protection
1. Employees are required to use impervious outer clothing, impervious gloves, face shields (8-inch minimum), and any other items deemed necessary to prevent repeated or prolonged skin contact with mercury. All PPE must satisfy OSHA requirements.
 2. Respiratory protection is required when performing mercury recovery/removal using approved chemical cartridge, at a minimum. Airborne concentrations of mercury are not expected to exceed 0.5 mg/m^3 .
- C. Containment and Disposal
1. Personal protective equipment and/or clothing, liquid mercury and mercury contaminated sludge or equipment should be containerized and stored in such a manner to satisfy hazardous waste requirements. All stored mercury should be placed in a secondary sealable, labeled container approved for mercury shipment and disposed of as specified in Section 3.02 below.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 PROTECTION OF ADJACENT AREAS AND THE ENVIRONMENT:

A. General

1. In the event brick is to be disturbed during any phase of the work, take all necessary actions to ensure that all ash, dust and debris is contained within the work area and that the activities in no way results in the contamination with lead or cadmium dust, of any adjacent areas, building, or the environment. The Contractor's specific methods and activities for managing metals exposure must be documented in the Contractor's Heavy Metals Control Program.

B. Containment

1. In the event a containment structure is required, ensure that such containment prevents ash, dust, debris, and brick from contaminating adjacent areas, building, or the environment in any fashion. This shall include any water runoff from wet removal methods. If a containment structure is not specified, the Contractor shall specify removal tools and methodologies which are fitted HEPA filter vacuum shroud attachments or are otherwise designed to eliminate the possible release of ash emissions into the air.

C. Contamination

1. If it is determined by visual identification that adjacent areas, buildings, or the environment have been contaminated as a result of the Contractor's work, the Contractor agrees to clean the affected premises at no charge and be responsible for all costs incurred by this clean-up activity.

3.02 DISPOSAL REQUIREMENTS:

A. General

1. The Contractor shall perform sampling and analysis as may be required to assure the proper and legal handling of the waste. Samples may be composited for analysis with the consent of the Commissioner. If any chemical analysis or sampling is performed by or on behalf of the Contractor, its Transporter, or its Treatment Storage and Disposal Facility (TSD), a copy of such analysis must be provided to the Commissioner at no additional cost.
2. Ensure that the waste disposal Subcontractor warrants and represents possession of all permits and/or licenses required under the Resource Conservation and Recovery Act (RCRA) as well as any state or local permits or licenses required for removal, repacking, transportation and disposal of hazardous waste.
3. All hazardous waste materials removed hereunder must be lawfully treated and disposed by the waste disposal Subcontractor at an Environmental Protection Agency (USEPA) permitted Treatment, Storage and Disposal Facility.
4. All wastes, drums, and other items removed hereunder must be lawfully treated and disposed of by the Contractor's waste disposal Subcontractor within sixty (60) days after the removal from the Site. Ensure that the waste disposal Subcontractor provides completed shipping documents for all hazardous wastes removed, which contain the information required under 40 CFR Part 262 Subpart B (hereinafter the "Manifest Form") and 6 NYCRR Part 372 as well as all Certificates of Disposal which specify where each component of all wastes

removed from the property is ultimately treated or disposed. Such Certificates shall include references to the Manifest Form for the shipment as well as address and USEPA identification numbers for the generator facility.

5. Ensure that all TSD facilities or transporters which the waste disposal Subcontractor intends to use to treat and/or dispose of hazardous waste picked up hereunder are approved for use by the Commissioner prior to any delivery of waste by the waste disposal subcontractor to such TSD facility.
6. Should any problems arise regarding the TSD facility chosen to accept the waste for treatment and disposal that would require the return of waste, or should such TSD facility have violated any environmental regulation which would result in regulatory enforcement action, ensure that the waste disposal Subcontractor immediately notifies the Contractor and Commissioner in writing of such situation, identifies an alternative TSD and obtains written approval from the Commissioner for disposal at such TSD.
7. Insure that the waste disposal Subcontractor provides completed shipping documents, hereinafter referred to as "Bills of Lading" for all nonhazardous "industrial" waste removed from the property. A Bill of Lading must accompany each waste shipment and must include information regarding the quantity and type of waste, the waste transporter name, and the date of removal from the property.

B. Transportation Requirements

1. Insure that the waste disposal Subcontractor providing waste transportation services possesses a valid Waste Hauler's permit issued pursuant to the New York State Department of Environmental Conservation (NYSDEC) regulations, 6 NYCRR Part 364. In addition, if the waste is to be transported and disposed of out of New York State, permits for those states through which the waste shall be transported and for where it shall be disposed may be required. It is the Contractor's responsibility to insure that the waste disposal Subcontractor correctly determines which permits are required and to provide such permits for review and approval of the Commissioner.
2. Packaging and transporting of all wastes shall be in accordance with the applicable sections of the Department of Transportation (DOT) regulations.

3.03 QUALIFICATIONS:

- A. The Contractor and Subcontractors involved in any activity which may impact lead and cadmium containing materials shall have demonstrated two years of experience in metals hazard assessment and management, environmental and personal air monitoring, worker protection and training, and metals remediation specification writing.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met.

END OF SECTION

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SECTION 02 81 30

REMOVAL OF CHLORINATED FLUOROCARBONS

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall furnish all labor, equipment, and materials required to perform all operations necessary to remove chlorinated fluorocarbon (CFC) containing equipment. CFC equipment at the Site includes, but is not limited to, air conditioners, refrigerators, drinking fountains, and garage equipment. The Contractor shall remove and dispose of all CFCs and compressor/equipment oils from CFC equipment. The Contractor's CFC removal protocols must be provided in a Work Plan and approved by the Commissioner prior to initiating any CFC-related work.

1.02 REGULATORY REQUIREMENTS:

- A. CFCs are to be removed and managed in accordance with the refrigerant recycling requirements of USEPA in Section 608 of the Clean Air Act (CAA), 1990, as amended, including final regulations published May 14, 1993 (58 FR 28660) and the prohibition on venting effective July 1, 1992. The CAA requirements include, but are not limited to:
 - 1. Service practices that maximize recycling of ozone depleting compounds (CFCs and hydrochlorofluorocarbons) during the servicing and disposal of air-conditioning and refrigeration equipment.
 - 2. Certification requirements for recycling and recovery equipment, technicians, and reclaimers.
 - 3. Restrictions on the sale of refrigerant to certified technicians.
 - 4. Persons servicing or disposing of air-conditioning and refrigeration equipment to certify to USEPA that they have acquired recycling or recovery equipment and are complying with the requirements of the rule.
 - 5. The repair of substantial leaks in air-conditioning and refrigeration equipment with a charge of greater than 50 pounds.
 - 6. Safe disposal requirements to ensure removal of refrigerants from goods that enter the waste stream with the charge intact (e.g., motor vehicle air conditioners, home refrigerators, and room air conditioners)
- B. The Prohibition on Venting - Effective July 1, 1992, Section 608 of the CAA prohibits individuals from knowingly venting ozone-depleting compounds used as refrigerants into the atmosphere while maintaining, servicing, repairing, or disposing of air-conditioning or refrigeration equipment. Only four types of releases are permitted under the

prohibition:

1. "De minimis" quantities of refrigerant released in the course of making good faith attempts to recapture and recycle or safely dispose of refrigerant.
 2. Refrigerants emitted in the course of normal operation of air-conditioning and refrigeration equipment (as opposed to during the maintenance, servicing, repair, or disposal of this equipment) such as from mechanical purging and leaks. However, USEPA is requiring the repair of substantial leaks.
 3. Mixtures of nitrogen and R-22 that are used as holding charges or as leak test gases, because in these cases, the ozone-depleting compound is not used as a refrigerant. However, a technician may not avoid recovering refrigerant by adding nitrogen to a charged system; before nitrogen is added, the system must be evacuated to the appropriate level in Table 1 of Paragraph I of this section. Otherwise, the CFC or HCFC vented along with the nitrogen shall be considered a refrigerant. Similarly, pure CFCs or HCFCs released from appliances shall be presumed to be refrigerants, and their release shall be considered a violation of the prohibition on venting.
 4. Small releases of refrigerant which result from purging hoses or from connecting or disconnecting hoses to charge or service appliances shall not be considered violations of the prohibition on venting. However, recovery and recycling equipment manufactured after November 15, 1993, must be equipped with low-loss fittings.
- C. Equipment Certification - The USEPA has established a certification program for recovery and recycling equipment. Under the program, USEPA requires that equipment manufactured on or after November 15, 1993, be tested by an USEPA-approved testing organization to ensure that it meets USEPA requirements. Recycling and recovery equipment intended for use with air-conditioning and refrigeration equipment besides small appliances must be tested under the ARI 740-1993 test protocol, which is included in the final rule as Appendix B. Recovery equipment intended for use with small appliances must be tested under either the ARI 740-1993 protocol or Appendix C of the final rule. The Agency is requiring recovery efficiency standards that vary depending on the size and type of air-conditioning or refrigeration equipment being serviced. For recovery and recycling equipment intended for use with air-conditioning and refrigeration equipment besides small appliances, these standards are the same as those in the second column of Table 1 of this section. Recovery equipment intended for use with small appliances must be able to recover 90 percent of the refrigerant in the small appliance when the small appliance compressor is operating and 80 percent of the refrigerant in the small appliance when the compressor is not operating. Equipment manufactured before November 15, 1993, including homemade equipment, shall be grandfathered if it meets the standards in the first column of Table 1 of this section. Third party testing is not required for equipment manufactured before November 15, 1993, but equipment manufactured on or after that date, including homemade equipment, must be tested by a third-party (see Equipment Certification above).
- D. Mandatory Technician Certification - USEPA has established a mandatory technician

certification program. The Agency has developed four types of certification:

1. For servicing small appliances (Type I).
2. For servicing or disposing of high- or very high-pressure appliances, except small appliances and MVACs (Type II).
3. For servicing or disposing of low-pressure appliances (Type III).
4. For servicing all types of equipment (Universal).

Persons removing refrigerant from small appliances and motor vehicle air conditioners for purposes of disposal of these appliances do not have to be certified. Technicians are required to pass an USEPA-approved test given by an USEPA-approved certifying organization to become certified under the mandatory program. USEPA has "grandfathered" individuals who have already participated in training and testing programs provided the testing programs:

5. are approved by the USEPA; and,
6. provide additional, USEPA-approved materials or testing to these individuals to ensure that they have the required level of knowledge.

Although any organization may apply to become an approved certified, USEPA plans to give priority to national organizations able to reach large numbers of people. USEPA encourages smaller training organizations to make arrangements with national testing organizations to administer certification examinations at the conclusion of their courses.

- E. Certification of Recycling and Recovery Equipment - The Contractor or Subcontractor disposing of air-conditioning and refrigeration equipment must certify, or have certification on record, to the USEPA and to the City of New York, that they have acquired (built, bought, or leased) recovery or recycling equipment, and that they are complying with the applicable requirements of the rules. This certification must be signed by the owner of the equipment or another responsible officer and sent to the appropriate USEPA Regional Office.
- F. Safe Disposal Requirements - Under USEPA's rule, equipment dismantled on-site before disposal (e.g., retail food refrigeration, cold storage warehouse refrigeration, chillers, and industrial process refrigeration) has to have the refrigerant recovered in accordance with USEPA's requirements for servicing. The Contractor must provide documentation of the removal.
- G. Major Recordkeeping Requirements - Technicians servicing appliances that contain 50 or more pounds of refrigerant must provide the owner with an invoice that indicates the amount of refrigerant added to the appliance. Technicians must also keep a copy of their proof of certification at their place of business. Reclaimers must maintain records of the names and addresses of persons sending them material reclamation and the

quantity of materials sent to them for reclamation. This information must be maintained on a transactional basis. Within 30 days of the end of the calendar year, reclaimers must report to USEPA the total quantity of material sent to them that year for reclamation, the mass of refrigerant reclaimed that year, and the mass of waste products generated that year.

H. Hazardous waste Disposal - If refrigerants are recycled or reclaimed, they are not considered hazardous under federal law. In addition, used oils contaminated with CFCs are not hazardous on the condition that:

1. they are not mixed with other waste.
2. they are not subjected to CFC recycling or reclamation.
3. they are not mixed with used oils from other sources.

Used oils that contain CFCs after the CFC reclamation procedure, however, are subject to specification limits for used oil fuels if these oils are destined for burning.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 SYSTEM EVACUATION:

- A. Evacuation Requirements - The Contractor is required to evacuate air-conditioning and refrigeration equipment of refrigerants and oils contaminated with CFCs to establish vacuum levels. If the recovery or recycling equipment is manufactured any time before November 15, 1993, the air-conditioning and refrigeration equipment must be evacuated to the levels described in the first column of Table 1. If the recovery or recycling equipment is manufactured on or after November 15, 1993, the air-conditioning and refrigeration equipment must be evacuated to the levels described in the second column of Table 1, and the recovery or recycling equipment must have been certified by an USEPA-approved equipment testing organization (see Equipment Certification).

TABLE 1

Type of Appliance	Inches of Mercury Vacuum* Using Equipment Manufactured	
	Before November 15, 1993	After November 15, 1993
HCFC-22 Appliance** Normally Containing Less Than 200 Pounds of Refrigerant	0	0
HCFC-22 Appliances** Normally Containing 200 Pounds or More of Refrigerant	4	10
Other High-Pressure Appliances** Normally Containing Less Than 200 Pounds of Refrigerant (CFC-12, -500, -114)	4	10
Other High-Pressure Appliances** Normally Containing 200 Pounds or More of Refrigerant (CFC-12, -500, -114)	4	15
Very High-Pressure Appliances (CFC-13, -503)	0	0
Low-High Pressure Appliances (CFC-11, HCFC-123)	25	25 mm Hg absolute

* Relative to Standard Atmospheric Pressure of 29.92" Hg

** Or Isolated Component of Such an Appliance

B. Exceptions to Evacuation Requirements - USEPA has established limited exceptions to its evacuation requirements for:

1. repairs to leaky equipment; and,
2. repairs that are not major and that are not followed by an evacuation of the equipment to the environment.

If, due to leaks, evacuation to the levels in Table 1 is not attainable, or would substantially contaminate the refrigerant being recovered, persons opening the appliance must:

3. isolate leaking from non-leaking components wherever possible;
4. evacuate non-leaking components to the levels in Table 1; and,
5. evacuate leaking components to the lowest level that can be attained without substantially contaminating the refrigerant. This level cannot exceed 0 psig.

If evacuation of the equipment to the environment is not performed when repairs are complete, and if the repair is not major, then appliance must:

6. be evacuated to at least 0 psig before it is opened if it is a high or very high-pressure appliance; or,
7. be evacuated to 0 psig before it is opened if it is a low-pressure appliance. Methods that require subsequent purging (e.g., nitrogen) cannot be used.

Major repairs are those involving removal of the compressor, condenser, evaporator, or auxiliary heat exchanger coil.

- C. Reclamation Requirement - USEPA has also established that refrigerant recovered and/or recycled can be returned to the same system or other systems owned by the same person without restriction. If refrigerant changes ownership, however, that refrigerant must be reclaimed (i.e., cleaned to the ARI 700 standard of purity and chemically analyzed to verify that it meets this standard).

3.02 QUALIFICATIONS

- A. The Contractor and Subcontractors involved in any activity associated with the removal or disposal of equipment containing CFCs shall have demonstrated two years of experience in CFC management, training and decommissioning of CFC-containing equipment.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met.

END OF SECTION

SECTION 02 82 13

ASBESTOS ABATEMENT

PART 1 – GENERAL

1.01 DESCRIPTION

- A. The Contract Documents are as defined in the "Agreement". The General Conditions shall apply to all Work of this Section.
- B. Work specified herein shall be the removal and disposal of Asbestos-Containing Materials (ACM) and asbestos-contaminated materials from designated areas of all City of New York DSNY Facilities including the Marine Transfer Station at the Gansevoort Peninsula, 2 Bloomfield Street, New York, New York, 10014.
- C. The following documents were reviewed and utilized to generate this abatement design specification which serves to locate and quantify the amount of ACM, and asbestos contaminated material, to be abated in support of this project.
 - 1. Final Report of Asbestos Survey Services (Sealed Incinerator and Boiler Room in the Destructor Plant) performed by LiRo Engineers, Inc. dated December 26, 2012;
 - 2. Final Report of Asbestos Survey Services (M2 & M5 Garages, MTS, MTS Ramp and Salt Shed) performed by LiRo Engineers, Inc. dated December 27, 2012.
- D. The phasing and scheduling of work for this project shall be coordinated with and approved by the Construction Project Manager and Facility Manager. The Construction Project Manager and Facility Manager will make the final determination on all issues under this Contract covered by this Specification.

1.02 SCOPE OF WORK

- A. The asbestos abatement contractor is to provide all labor, materials, equipment, services, testing, appurtenances, permits and agreements necessary to perform the work required for the abatement of ACM as required by these contract documents. All work shall be performed in accordance with this Specification, EPA regulations, OSHA regulations, New York City Local Law 70, Title 15, Chapter 1 RCNY, New York State Industrial Code 56, NIOSH recommendations, and any other applicable federal, state or local government regulations. Whenever there is a conflict or overlap of the above references, the most stringent provisions are applicable.
- B. The intent of this Specification section is to ensure that the asbestos abatement contractor is responsible for the following:
 - 1. Abatement of all ACM.

2. Cleaning and decontamination of the entire affected area.
 3. Demolition that may be required to access ACM in each area, Asbestos abatement contractor shall dispose of all debris associated with demolition activities as ACM waste.
 4. Removal and disposal of all ACM found within these areas such as duct vibration cloth, roof membrane, roof flashing material, etc.
 5. Provide all scaffolding, platform installation, equipment, tools, transportation and any other equipment required and/or necessary to complete all work described in the Contract Documents.
 6. The Asbestos abatement contractor shall be responsible for and shall include any and all fees or charges imposed by Local, State or Federal Law, Rule or Regulation applicable to the work specified herein, including fees or charges which may be imposed subsequent to the work.
 7. Prior to destructive demolition activities, the City of New York may elect to collect bulk samples of assumed asbestos-containing materials and analyze the bulk samples for asbestos content.
- C. The Asbestos abatement contractor shall perform the following work as described below and indicated on the drawings. The drawings are only a diagrammatic representation of the Work Areas and do not constitute the actual quantities of material. Asbestos abatement contractor is responsible for the confirmation of the actual total quantities of the Work.

1. Drawing H-002: Gansevoort Destructor Plant Sealed Incinerator Rooms - Ash Removal Floor Asbestos Abatement Plan – Phase I

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 1**. Work Area 1 shall be removed utilizing NYCDEP Full Containment Removal Procedures.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
1	NYCDEP Full Containment Removal Procedures	9,000 Sq. Ft. of gray fibrous board between furnace brick, gray mortar to yellow refractory brick, contaminated gray mortar to yellow refractory brick, and contaminated yellow refractory brick	–
		7,500 Sq. Ft. of white duct insulation (ash conveyor room and boiler room)	–
		9,000 Sq. Ft. of gray furnace siding insulation	–
		12,700 Sq. Ft. of floor debris	–
		10 Sq. Ft. of gray canvas gasket at fan casing flange	–
		950 Sq. Ft. of gray boiler insulation behind metal jacket	–
Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
1	NYCDEP Full Containment Removal Procedures	950 Sq. Ft. of gray mortar between boiler bricks and contaminated yellow boiler refractory brick	–
		150 Sq. Ft. of gray boiler breeching insulation	–
		12 Sq. Ft. of pipe flange gasket	–
		–	70,000 Ln. Ft. of braided wire insulation
		–	350 Ln. Ft. of white block pipe insulation and mud pipe fittings

2. **Drawing H-003: Gansevoort Destructor Plant Sealed Incinerator Rooms
Operating Floor Asbestos Abatement Plan – Phase I**

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 2**. Work Area 2 shall be removed utilizing NYCDEP Full Containment Removal Procedures.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
2	NYCDEP Full Containment Removal Procedures	30,000 Sq. Ft. of gray fibrous board between furnace brick, gray mortar to yellow refractory brick, contaminated gray mortar to yellow refractory brick, contaminated orange mortar to yellow refractory brick, contaminated yellow refractory brick and contaminated black refractory brick	–
		30,000 Sq. Ft. of gray furnace siding insulation	–
		16,400 Sq. Ft. of floor debris	–
		–	90,000 Ln. Ft. of braided wire insulation
		650 Sq. Ft. of white forced draft duct siding insulation	–
		950 Sq. Ft. of brown electrical backer board	–
		–	350 Ln. Ft. of white block pipe insulation and mud pipe fittings
		–	–

3. Drawing H-004: Gansevoort Destructor Plant Sealed Incinerator Rooms Storage Floor Asbestos Abatement Plan – Phase I

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 3**. Work Area 3 shall be removed utilizing NYCDEP Full Containment Removal Procedures.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
3	NYCDEP Full Containment Removal Procedures	3,200 Sq. Ft. of floor debris	–
		–	10,000 Ln. Ft. of braided wire insulation
		430 Sq. Ft. of rope gasket at furnace access doors and feed hopper	–
		140 Sq. Ft. of white canvas charging chute vibration damper	–
		–	60 Ln. Ft. of white block pipe insulation and mud pipe fittings

4. Drawing H-005: Gansevoort Destructor Plant Sealed Incinerator Rooms Fourth, Fifth and Sixth Floors Asbestos Abatement Plan – Phase I

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 4, Work Area 5 and Work Area 6**. Work Area 4, Work Area 5 and Work Area 6 shall be removed utilizing NYCDEP Full Containment Removal Procedures.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
4	NYCDEP Full Containment Removal Procedures	5,000 Sq. Ft. of floor debris	–
		–	12,000 Ln. Ft. of braided wire insulation
		–	50 Ln. Ft. of white block pipe insulation and mud pipe fittings
5	NYCDEP Full Containment Removal Procedures	200 Sq. Ft. of floor debris	–
		–	50 Ln. Ft. of white block pipe insulation and mud pipe fittings
6	NYCDEP Full Containment Removal Procedures	200 Sq. Ft. of floor debris	–
		–	50 Ln. Ft. of white block pipe insulation and mud pipe fittings

5. **Drawing H-006: Gansevoort Destructor Plant Roof Asbestos Abatement Plan – Phase II**

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Areas 7 through 14**. Work Area 7 through 14 shall be removed utilizing NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces and Section § 1-107 Foam Procedure for Roof Removal as indicated in table below. The asbestos abatement contractor shall be responsible for the removal and disposal of all roofing components, including but not limited to roof membrane and roof flashing down to the substrate/deck.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
7 (Roof A)	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	30 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	–
8 (Roof B)	NYCDEP Section § 1-107 Foam Procedure for Roof Removal	700 Sq. Ft. of Black Roof Base Flashing	–
		15 Sq. Ft. of Black Tar Associated with Pitch Pocket, Drains and Penetrations	–
	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	30 Sq. Ft. of Gray Caulk at Cap Flashing, Old	–
		30 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	–
9 (Roof C)	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	2 Sq. Ft. of Gray Caulk at Door Frame	–
		15 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	–

10 (Roof D)	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	5 Sq. Ft. of Gray Caulk at Door Frame	-
		40 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	-
	NYCDEP Section § 1-107 Foam Procedure for Roof Removal	672 Sq. Ft. of Black Roof Base Flashing	-
	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	4 Sq. Ft. of Black Caulk on Conduit and Facade	-
11 (Roof E)	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	7 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	-
12 (Roof F)	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	5 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	-
		4 Sq. Ft. of Black Caulk on Facade	-
13 (Roof G)	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	2 Sq. Ft. of White Caulk on Door Frame	-
		40 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	-
	NYCDEP Section § 1-107 Foam Procedure for Roof Removal	15 Sq. Ft. of Black Tar Associated with Pitch Pocket, Drains and Penetrations	-
14 (Roof I)	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	5 Sq. Ft. of Beige Expansion Joint Caulk (at Cornice and Coping Stone)	-
	NYCDEP Section § 1-107 Foam Procedure for Roof Removal	150 Sq. Ft. of Black Roof Membrane and Contaminated Black Roof Vapor Barrier	-

6. Drawing H-007: Gansevoort Destructor Plant First Floor Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 15**. Work Area 15 shall be removed utilizing NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal and Section § 1-109 Abatement From Vertical Exterior Surfaces as indicated in table below.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
15	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	70 Sq. Ft. of Gray Window Caulk	–
		140 Sq. Ft. of White Window Glazing	–
		20 Sq. Ft. of White Caulk at Window Sill and Cornice	–
		30 Sq. Ft. of White Expansion Joint Caulk	–
		12 Sq. Ft. of White Caulk on Door Frame	–
		2,000 Sq. Ft. of Black Spandrel Flashing Tar	–
	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	–	200 Ln. Ft. of Brown Layered Paper Pipe and Pipe Joint Insulation

7. Drawing H-008: Gansevoort Destructor Plant Second Floor Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 16**. Work Area 16 shall be removed utilizing NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal, Section § 1-108 Foam/Viscous Liquid Use in Flooring Removal and Section § 1-109 Abatement From Vertical Exterior Surfaces as indicated in table below.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
16	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	40 Sq. Ft. of Gray Window Caulk	–
		70 Sq. Ft. of White Window Glazing	–
		20 Sq. Ft. of White Caulk at Window Sill and Cornice	–
		10 Sq. Ft. of White Expansion Joint Caulk	–
		1,000 Sq. Ft. of Black Spandrel Flashing Tar	–
	NYCDEP Section § 1-108 Foam/Viscous Liquid Use in Flooring Removal	120 Sq. Ft. of Black 9"x9" Floor Tiles and associated Black Mastic	–
	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	–	300 Ln. Ft. of Brown Layered Paper Pipe and Pipe Joint Insulation

8. Drawing H-009: Gansevoort Destructor Plant Third Floor Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 17**. Work Area 17 shall be removed utilizing NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal, Section § 1-108 Foam/Viscous Liquid Use in Flooring Removal and Section § 1-109 Abatement From Vertical Exterior Surfaces as indicated in table below.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
17	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	85 Sq. Ft. of Gray Window Caulk	–
		165 Sq. Ft. of White Window Glazing	–
		30 Sq. Ft. of White Caulk at Window Sill and Cornice	–
		10 Sq. Ft. of White Expansion Joint Caulk	–
		1,500 Sq. Ft. of Black Spandrel Flashing Tar	–
	NYCDEP Section § 1-108 Foam/Viscous Liquid Use in Flooring Removal	900 Sq. Ft. of White 12"x12" Floor Tiles	–
		100 Sq. Ft. of Black Cove-base and associated Yellow Mastic	–
	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	–	200 Ln. Ft. of Brown Layered Paper Pipe and Pipe Joint Insulation

9. **Drawing H-010: Gansevoort Destructor Plant Fourth Floor Asbestos Abatement Plan – Phase II**

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 18**. Work Area 18 shall be removed utilizing NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal and Section § 1-109 Abatement From Vertical Exterior Surfaces as indicated in table below.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
18	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	45 Sq. Ft. of Gray Window Caulk	–
		90 Sq. Ft. of White Window Glazing	–
		15 Sq. Ft. of White Caulk at Window Sill and Cornice	–
		10 Sq. Ft. of White Expansion Joint Caulk	–
		1,500 Sq. Ft. of Black Spandrel Flashing Tar	–
	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	–	50 Ln. Ft. of White Magnesia Insulation on Pipes and Pipe Joints

10. Drawing H-011: Gansevoort Destructor Plant Fifth and Sixth Floors Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 19, Work Area 20, and Work Area 21**. Work Area 19 through Work Area 21 shall be removed utilizing NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal and Section § 1-109 Abatement From Vertical Exterior Surfaces as indicated in table below.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
19	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	5 Sq. Ft. of Gray Window Caulk	–
		10 Sq. Ft. of White Window Glazing	–
		5 Sq. Ft. of White Caulk at Window Sill and Cornice	–
		5 Sq. Ft. of White Expansion Joint Caulk	–
		500 Sq. Ft. of Black Spandrel Flashing Tar	–
	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	–	50 Ln. Ft. of White Magnesia Insulation on Pipes and Pipe Joints
20	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	3 Sq. Ft. of Gray Window Caulk	–
		7 Sq. Ft. of White Window Glazing	–
		2 Sq. Ft. of White Caulk at Window Sill and Cornice	–
21	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	5 Sq. Ft. of Gray Window Caulk	–
		8 Sq. Ft. of White Window Glazing	–
		3 Sq. Ft. of White Caulk at Window Sill and Cornice	–
	–	50 Ln. Ft. of White Magnesia Insulation on Pipes and Pipe Joints	

11. Drawing H-012: MTS Exterior Roof Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 22**. Work Area 22 shall be removed utilizing NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
22	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	40 Sq. Ft. of White Window Caulk (Newer) and Gray Window Caulk (Older)	–

12. Drawing H-013: MTS Interior Roof Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 23**. Work Area 23 shall be removed utilizing NYCDEP Section § 1-107 Foam Procedure for Roof Removal. The asbestos abatement contractor shall be responsible for the removal and disposal of all roofing components, including but not limited to roof membrane and roof flashing down to the substrate/deck.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
23	NYCDEP Section § 1-107 Foam Procedure for Roof Removal	2,500 Sq. Ft. of Black Roof Vapor Barrier (5 th Layer) and Contaminated Upper Roofing Layers (1 st through 4 th Layers)	–

13. Drawing H-014: MTS Lower Level Pier Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 24 and Work Area 25**. Work Area 24 and Work Area 25 shall be removed utilizing NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
24	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	2 Sq. Ft. of White Caulk at Door Frame	–
		225 Sq. Ft. of Black Tar on Wooden Pier Columns	–
25	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	2 Sq. Ft. of White Caulk at Door Frame	–
		225 Sq. Ft. of Black Tar on Wooden Pier Columns	–

14. Drawing H-015: MTS First Floor Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 26**. Work Area 26 shall be removed utilizing NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal and Section § 1-109 Abatement From Vertical Exterior Surfaces as indicated in table below.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
26	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	20 Sq. Ft. of White Window Caulk (Newer) and Gray Window Caulk (Older)	–
	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	4 Sq. Ft. of Gray Air-cell Pipe Insulation Sleeves through Wall Penetrations	–

15. Drawing H-016: MTS Ramp and Rooms Under the Ramp Asbestos Abatement Plan – Phase II

- a. Remove and dispose of all asbestos-containing materials listed in table below within **Work Area 27 and Work Area 28**. Work Area 27 and Work Area 28 shall be removed utilizing NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal and Section § 1-109 Abatement From Vertical Exterior Surfaces as indicated in table below.

Work Area	Removal Procedure	Approximate Square Feet (Sq. Ft.)	Approximate Linear Feet (Ln. Ft.)
27	NYCDEP Section § 1-106 Tent Procedures/Glove bag for Pipe Insulation Removal	-	250 Ln. Ft. of White Pipe and Pipe Joint Insulation under Black Tar Canvas
		-	100 Ln. Ft. of White Pipe Joint Insulation on Horsehair Insulated Pipe
28	NYCDEP Section § 1-109 Abatement From Vertical Exterior Surfaces	10 Sq. Ft. of Black Expansion Joint Caulk at Retaining Wall (Exterior)	-

- D. The facility is under the jurisdiction of the City of New York Department of Sanitation (DSNY). The asbestos abatement contractor shall perform the work of this contract in a manner that will be least disruptive to the normal use of the building.
- E. Asbestos abatement contractor's attention is directed to the fact that patents cover certain methods of asbestos abatement indicated in the specifications. To date, patents have been issued with regard to negative pressure enclosures or negative or reduced pressure and glove-bag.
- F. Asbestos abatement contractor shall be solely responsible for and shall hold the City of New York Department of Design and Construction and the City harmless from, any and all damages, losses and expenses resulting from any infringement by Asbestos abatement contractor of any patent, including but not limited to the patents described above, used by Asbestos abatement contractor during performance of this agreement.
- G. Prior to starting, the asbestos abatement contractor must notify the Commissioner of the City of New York Department of Design and Construction if he anticipates any difficulty in performing the work as directed and required by these Specifications. Asbestos abatement contractor shall be required to attend an on-site job meeting with the Construction Project Manager prior to start of work to examine conditions of the site for removal and plan the sequence for removal operations.

- H. The asbestos abatement contractor shall retain a certified Project Designer for the preparation of an Asbestos Variance Application (ACP-9), if required.
- I. The asbestos abatement contractor shall be responsible for preparing and submitting all filings, notifications, amendments and variances, etc. required by all City, State and Federal regulatory agencies having jurisdiction, at no additional cost to the City of New York.
- J. The asbestos abatement contractor shall retain a Registered Design Professional (person licensed and registered to practice the professions of architecture or engineering under the Education Law of the State of New York) to prepare a Work Place Safety Plan (WPSP), if required.
- K. The asbestos abatement contractor shall retain a Registered Design Professional (person licensed and registered to practice the professions of architecture or engineering under the Education Law of the State of New York) to perform final inspections required pursuant to Title 28 of the Administrative Code, including but not limited to special inspections required under Chapter 17 of the Building Code. Such special inspections and A-TR1 forms shall be completed by the Registered Design professional.
- L. For coordination with other Asbestos abatement contractors, see the General Conditions governing all Contracts.
- M. Related Asbestos Removal Work Under Other Contracts:
 - 1. Each asbestos abatement contractor shall be responsible for the removal of incidental asbestos not identified in this section and found prior to or during the Work.
 - 2. Incidental asbestos is defined as ACM that is discovered during the course of their work that must be abated to enable them to perform the work of their Contract.
- N. Work Hours:
 - 1. The asbestos abatement contractor shall establish his work schedule in a way that avoids interference or conflict with the normal functioning of the facility. Work in the evenings shall be done at no additional cost to the City.
 - 2. All work shall be done during regular working hours unless the Asbestos abatement contractor requests authorization to work other than regular working hours and such authorization is granted by the Commissioner (Regular working hours are those during which any given facility in which work is to be done is customarily open and functioning). If such work schedule is authorized by the Commissioner the work shall be done at no additional cost to the City.
 - 3. The order of phases and start dates associated with each will be determined by the Construction Project Manager.

4. Asbestos abatement contractor shall be required to schedule waste transfer during evening hours, when activity within the facility is at a minimum. Evening hours are defined as 6:00 p.m. to 6:00 a.m. Waste transfer must be approved by the Construction Project Manager and Facility Manager.
- O. The following conditions shall apply to all temporary shutdowns of existing services:
1. All temporary lighting and temporary electrical services for use in the Work Area shall be in weather proof enclosures and be ground fault protected and:
 2. Shall be performed at no additional charge to the City.
 3. Shall be performed at times not interfering with the other activities in the building.
 4. Shall be performed only with written consent from the Commissioner and the Facility Manager.
 5. Shall be made through written request to the Commissioner at least 10 days in advance with complete written description of the work to be performed.
- P. Stages of Asbestos Removal Work:
- The asbestos abatement contractor will be required to perform the work and it is the intent of this Specification to remove all asbestos containing and asbestos contaminated materials from the Work Area. The asbestos abatement contractor is responsible for verifying all quantities of materials listed.
- Q. Certain equipment in the Work Area may need to remain operational during removal. Therefore, the removal of ACM from this equipment shall be performed as the last removal activities within the Work Area. The Asbestos abatement contractor shall coordinate the scheduling for the removal of ACM on functioning equipment with the Construction Project Manager.

1.03 QUALIFICATIONS OF ASBESTOS ABATEMENT CONTRACTOR

- A. Requirements: The asbestos abatement contractor must demonstrate compliance with the special experience requirements set forth in subparagraphs (1) through (5) below. The asbestos abatement contractor must submit documentation demonstrating compliance with all listed requirements. Such documentation shall include without limitation, all required licenses, certificates, and documentation.
1. The asbestos abatement contractor must, whether an individual, corporation, partnership, joint venture or other legal entity, demonstrate for the three year period prior to the work, that it has been licensed by the New York State Department of Labor, as an "Asbestos Abatement Contractor".

2. The asbestos abatement contractor must, for the three year period prior to the work, have been in the business of providing asbestos abatement services as a routine part of its daily operations.
 3. The asbestos abatement contractor proposing to do asbestos abatement work must be thoroughly experienced in such work and must provide evidence of having successfully performed and completed in a timely fashion at least five (5) asbestos abatement projects of similar size and complexity. The aggregate cost of these projects must be at least \$1,000,000 in each of the three years.
 4. For each project submitted to meet the experience requirements set forth above, the asbestos abatement contractor must submit the following information for the project; name and location of the project; name title and telephone number of the owner or the owner's representative who is familiar with the asbestos abatement contractor's work; brief description of the work completed as a prime or sub-asbestos abatement contractor; amount of contract or subcontract and the date of completion.
 5. The asbestos abatement contractor must demonstrate that it has the financial resources, supervisory personnel and equipment necessary to carry out the work and to comply with the required performance schedule, taking into consideration other business commitments. The asbestos abatement contractor must submit such documentation as may be required by the Department of Design and Construction to demonstrate that it has the requisite capacity to perform the required services of this contract.
- B. Throughout the specifications, reference is made to codes and standards which establish qualities and types of workmanship and materials, and which establish methods for testing and reporting on the pertinent characteristics thereof. Provide materials or workmanship that meet or exceed the specifically named codes or standards where required by these specifications.
- C. Site Investigation: Asbestos abatement contractor shall inspect all the specifications and related drawings, and will investigate and confirm the site conditions affecting the work, including, but not limited to:
1. Physical considerations and conditions of both the material and structure. These considerations include any obstacles or obstructions encountered in accessing or removing the material.
 2. Handling, storage, transportation and disposal of the material.
 3. Availability of qualified and skilled labor.
 4. Availability of utilities.
 5. Exact quantities of all materials to be disturbed and/or removed.

1.04 WORK BY OTHERS

The City reserves the right during the term of this Contract to have work performed on asbestos abatement projects by other asbestos abatement contractors as the situation warrants.

1.05 DEFINITIONS

- A. General Explanation: Certain terms used in this Specification Section are defined below. Definitions and explanations of this Specification Section are not necessarily complete or exclusive, but are general for the Work to the extent they are not stated more explicitly in another element of the Contract Documents.
- B. Definitions in General Use:
1. Approve: Where used in conjunction with Engineer's response to submittals, requests, applications, inquiries, reports and claims by Asbestos abatement contractor, the meaning of term "approved" will be held to limitations of Engineer's responsibilities and duties as specified in Contract Documents. In no case will "approval" by Engineer be interpreted as a release of Asbestos abatement contractor from responsibilities to fulfill requirements of Contract Documents.
 2. Directed, Requested, etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by Engineer," "requested by Engineer," and similar phrases. However, no such implied meaning will be interpreted to extend Engineer's responsibility into Asbestos abatement contractor's responsibility for construction supervision.
 3. Furnish: Except as otherwise defined in greater detail, term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.
 4. Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on Drawings, to other paragraphs or schedules in the Specifications, and to similar means of recording requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference, and no limitation of location is intended except as specifically noted.
 5. Install: Except as otherwise defined in greater detail, term "install" is used to describe operations at Project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.

6. **Installer:** The term "installer" is defined as the entity (person or firm) engaged by the asbestos abatement contractor, or its sub-asbestos abatement contractor for performance of a particular unit of work at Project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (installers) be expert in operations they are engaged to perform.
7. **Provide:** Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.
8. **Third-Party Air Monitor:** The term "Third-Party Air Monitor " is defined as an entity engaged by City and Construction Project Manager to perform specific inspections or tests of the work, either at Project site or elsewhere; and to report and (if required) interpret results of those inspections or tests.

C. Definitions Relative to Asbestos Abatement:

1. **Abatement:** Any and all procedures physically taken to control fiber release from asbestos-containing materials. This includes removal, encapsulation, enclosure, cleanup and repair.
2. **Adequately Wet:** The complete penetration of a material with amended water to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then the material has not been adequately wetted. However, the absence of visible emissions is not evidence of being adequately wet. ACM must be fully penetrated with the wetting agent in order to be considered adequately wet. If the ACM being abated is resistant to amended water penetration, wetting agent shall be applied to the material prior to and during removal as necessary to minimize fiber release.
3. **Aggressive Sampling:** Method of sampling in which the individual collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.
4. **AHERA:** Asbestos Hazard Emergency Response Act of 1986
5. **AIHA:** American Industrial Hygiene Association.
6. **Airlock:** System for permitting entrance and exit while restricting air movement between a contaminated area and an uncontaminated area. It consists of two curtained doorways separated by a distance of at least three feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.
7. **Air Sampling:** Process of measuring the fiber content of a known volume of air collected during a specific period. The procedure utilized for asbestos follows the

NIOSH Standard Analytical Method 7400, or the provisional transmission electron microscopy methods developed by the US EPA which is utilized for lower detection levels and specific fiber identification.

8. Ambient Air Monitoring: "Ambient air monitoring" shall mean measurement or determination of airborne asbestos fiber concentrations outside but in the general vicinity of the worksite.
9. Amended Water: Water to which a surfactant has been added.
10. ANSI: American National Standards Institute
11. Area Air Sampling: Any form of air sampling or monitoring where the sampling device is placed at some stationary location.
12. Asbestos: Any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cummingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.
13. Asbestos-Containing Material (ACM): Asbestos or any material containing more than one-percent asbestos.
14. Asbestos-Containing Waste Material: ACM, asbestos-contaminated objects or debris associated with asbestos abatement requiring disposal.
15. Asbestos-Contaminated Objects: Any objects which have been contaminated by asbestos or asbestos-containing material.
16. Asbestos Assessment Report: "Asbestos Assessment Report" shall mean the "Form ACP-5" form, as approved by NYCDEP, by which a NYCDEP-certified asbestos investigator certifies that a building or structure (or portion thereof) is free of ACM or the amount of ACM to be abated constitutes a minor project.
17. Asbestos Handler: Individual who disturbs, removes, repairs, or encloses asbestos material. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.
18. Asbestos Handler Supervisor: Individual who supervises the handlers during an asbestos project and ensures that proper asbestos abatement procedures as well as individual safety procedures are being adhered to. This individual shall have completed approved training course(s) and be in possession of certification issued by NYCDEP and NYSDOL.
19. Asbestos Investigator: An individual certified by NYCDEP as having successfully demonstrated his or her ability to identify the presence of and evaluate the condition of asbestos in a building or structure.

20. Asbestos Project: Any form of work performed in a building or structure which will disturb (e.g., remove, enclose, encapsulate) more than 25 linear feet or more than 10 square feet of asbestos-containing material.
21. ASTM: American Society for Testing and Materials.
22. Asbestos Project Notification: The "Form ACP-7" asbestos project notification form as approved by DEP.
23. Authorized Visitor: Authorized visitor shall mean the City of New York and his/her representative, and any representative of a regulatory or other agency having jurisdiction over the project.
24. Building Owner: Person in whom legal title to the premises is vested unless the premises are held in land trust, in which instance Building Owner means the person in whom beneficial title is vested. For this project, the Owner is the City of New York.
25. Building Materials: Any and all manmade materials, including but not limited to interior and exterior finishes, equipment, bricks, mortar, concrete, plaster, roofing, flooring, caulking, sealants, tiles, insulation, and outdoor paving such as sidewalks, paving tiles and asphalt.
26. Certified Industrial Hygienist (CIH): Individual with a minimum of five years' experience as an industrial hygienist and who has successfully completed both levels of the examination administered by the American Board of Industrial Hygiene and who is currently certified by that board.
27. Certified Safety Professional (CSP): Individual having a bachelor's degree from an accredited college or university and a minimum of four years' experience as a safety professional and who has successfully completed both levels of the examination administered by the Board of Certified Safety Professionals and who is currently certified by that board.
28. Chain of Custody: "Chain of Custody" shall mean the form or set of forms that document the collection and transfer of a sample.
29. City: City of New York
30. Clean Room: An uncontaminated area or room that is part of worker decontamination enclosure system with provisions for storage of workers' street clothes and protective equipment.
31. Clearance Air Monitoring: Employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers and shall be performed as the final abatement activity.

32. Commissioner: shall mean the head of the Agency that has entered into this contract or his/her duly authorized representative.
33. Competent Person: Shall mean the designated person as defined by OSHA in 29 CFR1926.1101.
34. Curtained Doorway: Device that consists of at least three overlapping sheets of fire retardant plastic over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and left side. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.
35. Decontamination Enclosure System: Series of connected rooms, separated from the Work Area and from each other by air locks, for the decontamination of workers, materials, waste containers, and equipment.
36. Demolition: The dismantling or razing of a building, including all operations incidental thereto (except for asbestos abatement activities), for which a demolition permit from the New York City Department of Buildings is required.
37. NYCDEP or DEP: The New York City Department of Environmental Protection.
38. Disturb: Any action taken which may alter, change, or stir, such as but not limited to the removal, encapsulation, enclosure or repair of asbestos-containing material.
39. DOB: The New York City Department of Buildings.
40. Egress: A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge.
41. ELAP: Environmental Laboratory Approval Program administered by the New York State Department of Health.
42. Encapsulant (sealant) or Encapsulating Agent: Liquid material which can be applied to ACM and which temporarily controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.

43. Encapsulation: The coating or spraying of asbestos-containing material encapsulant. A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.
44. Enclosure: Construction of airtight walls and/or ceilings between ACM and the facility environment, or around surfaces coated with ACM, or any other appropriate procedure as determined by the NYCDEP which prevents the release of asbestos fibers.
45. EPA or USEPA: United States Environmental Protection Agency.
46. Equipment Room: Contaminated area or room that is part of the worker decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.
47. Exit: That portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction to provide a protected path of egress travel between the exit access and the exit discharge.
48. FDNY: The Fire Department of the City of New York.
49. Fiber: An acicular single crystal or a similarity elongated polycrystalline aggregate which displays some resemblance to organic fibers by having such properties as flexibility, high aspect ratio, silky luster, axial lineation, and others, and which has attained its shape primarily through growth rather than cleavage.
50. Fixed Object: A unit of equipment, furniture, or other item in the work area which cannot be removed from the work area. Fixed objects shall include equipment, furniture, or other items that are attached, in whole or in part, to a floor, ceiling, wall, or other building structure or system or to another fixed object and cannot be reasonably removed from the work area. Fixed objects shall also include pipes and other equipment inside the work area which are not the subject of the asbestos project. Active fire suppression system components shall not be considered fixed objects.
51. Glovebag technique: shall mean a method for removing asbestos-containing material from heating, ventilation and air conditioning (HVAC) ducts, short piping runs, valves, joints, elbows, and other nonplanar surfaces. The glovebag assembly is a manufactured device consisting of a large bag (constructed of at least 6-mil transparent plastic), two inward-projecting long sleeve gloves, one inward-projecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all asbestos fibers released during the removal process.

52. HEPA-Filter: High efficiency particulate air filter capable of trapping and retaining 99.97 percent of particles (asbestos fibers) greater than 0.3 micrometers mass median aerodynamic equivalent diameter.
53. HEPA vacuum equipment: "HEPA vacuum equipment" shall mean vacuuming equipment with a HEPA filter.
54. Holding Area: Chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area.
55. Homogeneous Work Area: Portion of the Work Area that contains one type of ACM and/or where one type of abatement is used.
56. Industrial Hygiene: Science and art devoted to the recognition, evaluation, and control of those environmental factors or stresses, arising in or from the work place, which may cause sickness, impaired health and well being, or significant discomfort and inefficiency among worker or among the citizens of the community.
57. Industrial Hygienist: Individual having a college or university degree or degrees in Engineering, Chemistry, Physics or Medicine, or related Biological Sciences who, by virtue of special studies and training, has acquired competence in industrial hygiene. Such special studies and training must have been sufficient in all of the above cognate sciences to provide the abilities:
 - a. To recognize the environmental factors and to understand their effect on people and their well being; and
 - b. To evaluate, on the basis of experience and with the aid of quantitative measurement techniques, the magnitude of these stresses in terms of ability to impair people's health and well being; and
 - c. To prescribe methods to eliminate, control, or reduce such stresses when necessary to alleviate their efforts.
58. Isolation Barrier: The construction of partitions, the placement of solid materials, and the plasticizing of apertures to seal off the work place from surrounding areas and to contain asbestos fibers in the work area.
59. Large Asbestos Project: Asbestos project involving the disturbances (e.g., removal, enclosure, encapsulation) of 260 linear feet or more of ACM or 160 square feet or more of ACM.
60. Log: An official record of all activities that occurred during the project. At a minimum, the log shall identify the City of New York (owner), agent, asbestos abatement contractor, and workers, and other pertinent information including

daily activities, cleanings and waste transfers, names and certificate numbers of asbestos handler supervisors and asbestos handlers; results of inspections of decontamination systems, barriers, and negative pressure ventilation equipment; summary of corrective actions and repairs; work stoppages with reason for stoppage; manometer readings at least twice per work shift; daily checks of emergency and fire exits and any unusual events.

61. Minor Project: A project involving the disturbance (e.g., removal, enclosure, encapsulation, repair) of 25 linear feet or less of asbestos containing material or 10 square feet or less of asbestos containing material.
62. Movable Object: Unit of equipment or furniture in the Work Area that can be removed from the Work Area.
63. Negative Air Pressure Equipment: Portable local exhaust system equipped with HEPA filtration. The system shall be capable of creating a negative pressure differential between the outside and inside of the Work Area.
64. NESHAPS: National Emission Standards for Hazardous Air Pollutants.
65. NFPA: The National Fire Protection Association.
66. NIOSH: National Institute for Occupational Safety and Health.
67. DEP or NYCDEP: New York City Department of Environmental Protection
68. NYSDOL: New York State Department of Labor.
69. NYSDOL ICR 56: "NYSDOL ICR 56" shall mean Part 56 of the Official Compilation of Codes, Rules and Regulations of the State of New York or 12 NYCRR Part 56.
70. NYSDOH: The New York State Department of Health.
71. Obstruction: The blocking of a means of egress with any temporary structure or barrier. A double layer of fire-retardant 6-mil polyethylene sheeting shall not be considered an obstruction when it is prominently marked as an exit with photo luminescent signage or paint and cutting tools (knife, razor) are attached to the work area side of the sheeting for use in the event that the sheeting must be cut to permit egress. A corridor shall not be considered obstructed when there is a clear path measuring at least three (3) feet wide.
72. Occupied Area: Area of the work site where abatement is not taking place and where personnel or occupants normally function or where workers are not required to use personal protective equipment.
73. OSHA: Occupational Safety and Health Administration.

74. Outside air: "Outside air" shall mean the air outside the work place.
75. Person: Individual, partnership, company, corporation, association, firm, organization, governmental agency, administration, or department, or any other group of individuals, or any officer or employee thereof.
76. Personal Air Monitoring: Method used to determine employees' exposure to airborne asbestos fibers. The sample is collected outside the respirator in the worker's breathing zone.
77. Personal Protective Equipment (PPE): Appropriate protective clothing, gloves, eye protection, footwear, and head gear.
78. Phase Contrast Microscopy (PCM): The measurement protocol for the assessment of the fiber content of air. (NIOSH Method 7400).
79. Physician: Person licensed or otherwise authorized under Article 131 Section 65.22 of the New York State Education Law.
80. Plasticize: To cover floors and walls with fire retardant plastic sheeting as herein specified or by using spray plastics as acceptable to the Department.
81. Polarized Light Microscopy (PLM): The measurement protocol for the assessment of the asbestos content of bulk materials. (Interim Method for the Determination of Asbestiform Materials in Bulk Insulation Samples- 40 CFR Part 763, Subpart F, Appendix A as amended on September 1, 1982)
82. Project Designer: A person who holds a valid Project Designer Certificate issued by the New York State Department of Labor.
83. Project Monitor: A person who holds a valid Project Monitor Certificate issued by the New York State Department of Labor.
84. Qualitative Fit Test: Individual test subject's responding (either voluntarily or involuntarily) to a chemical challenge outside the respirator face-piece. Acceptable methods include irritant smoke test, odorous vapor test, and taste test.
85. Quantitative Fit Test: Exposing the respiratory wearer to a test atmosphere containing an easily detectable, nontoxic aerosol, vapor or gas as the test agent. Instrumentation, which samples the test atmosphere and the air inside the face-piece of the respirator, is used to measure quantitatively the leakage into the respirator. There are a number of test atmospheres, test agents, and exercises to perform during the test.

86. Registered Design Professional: A person licensed and registered to practice the professions of architecture or engineering under the Education Law of the State of New York.
87. Removal: Stripping of any asbestos- containing materials from surfaces or components of a facility or taking out structural components in accordance with 40 CFR 61 Subparts A and M.
88. Renovation: An addition or alteration or change or modification of a building or the service equipment thereof, that is not classified as an ordinary repair as defined in §27-125 of the Administrative Code of the City of New York.
89. Repair: Corrective action using specified work practices (e.g., glovebag, plastic tent procedures, etc.) to minimize the likelihood of fiber release from minimally damaged areas of ACM.
90. Replacement material: Any material used to replace ACM that contains less than .01 percent asbestos.
91. Shift: A worker's, or simultaneous group of workers', complete daily term of work.
92. Shower Room: Room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water controllable at the tap and arranged for complete showering during decontamination.
93. Small Asbestos Project: Asbestos project involving the disturbance (e.g., removal, enclosure, encapsulation) of more than 25 and less than 260 linear feet of ACM or more than ten and less than 160 square feet of ACM.
94. Staging Area: Work Area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the Work Area.
95. Strip: To remove asbestos materials from any part of the facility.
96. Structural Member: Load-supporting member of a facility, such as beams and load-supporting walls, or any non-load-supporting member, such as ceiling and non-load-supporting walls.
97. Surface barriers: The plasticizing of walls, floors, and fixed objects within the work area to prevent contamination from subsequent work.
98. Surfactant: Chemical wetting agent added to water to improve penetration.
99. Transmission Electron Microscopy (TEM): The measurement protocol for the assessment of the asbestos fiber content of air. Interim Transmission Electron Microscopy Analytical Methods-40 CFR Part 763, Subpart E, Appendix A.

100. Visible Emissions: Emissions containing particulate material that are visually detectable without the aid of instruments.
101. Washroom: Room between the Work Area and the holding area in the equipment decontamination enclosure system where equipment and waste containers are wet cleaned and/or HEPA-vacuumed prior to disposal.
102. Waste decontamination enclosure system: "Waste decontamination enclosure system" shall mean the decontamination enclosure system designated for the controlled transfer of materials and equipment, consisting of a washroom and a holding area.
103. Wet Cleaning: "Wet cleaning" shall mean the removal of asbestos fibers from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water.
104. Wet methods: "Wet methods" shall mean the use of amended water or removal encapsulants to minimize the generation of fibers during ACM disturbance.
105. Work Area: Designated rooms, spaces, or areas of the building or structure where asbestos abatement activities take(s) place.
106. Worker Decontamination Enclosure System: Portion of a decontamination enclosure system designed for controlled passage of workers and authorized visitors, consisting of a clean room, a shower room, and an equipment room separated from each other and from the Work Area by airlocks and curtained doorways.
107. Work Place: The work area and the decontamination enclosure system(s).
108. Work Place Safety Plan: Construction documents prepared by a registered design professional and submitted for review by DEP in order to obtain an asbestos abatement permit. Such plan shall include, but not be limited to, plans, sections, and details of the work area clearly showing the extent, sequence, and means and methods by which the work is to be performed.
109. Work Site: Premises where abatement activity is being performed. May be composed of one or more Work Areas.

1.06 STANDARD OPERATING PROCEDURES

- A. Develop and implement a written standard procedure for abatement work to ensure maximum protection and safeguard from asbestos exposure of the workers, visitors, employees, public, and environment.

B. TELEPHONE PAGING DEVICE

The asbestos abatement contractor or his authorized representative shall, at all times during the normal workday or during periods of overtime work under this Contract, carry a 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 or 929 area code. He shall supply the Department of Design and Construction with the activation number for the device and he is liable to respond back to the calls from the City of New York within the next one (1) hour period after he receives calls from the City of New York. The cost to the asbestos abatement contractor for this device and all charges accruing thereto is deemed included in the work.

C. The standard operating procedure shall ensure:

1. Tight security from unauthorized entry into the workspace.
2. Restriction of asbestos abatement contractor's personnel to the immediate Work Area and access/egress routes.
3. Donning of proper protective clothing and respiratory protection prior to entering the Work Area.
4. Safe work practices in the work place, including provisions for inter-room communications, exclusion of eating, drinking, smoking, or in any way breaking the respiratory protection.
5. Proper exit practices from the work space to the outside through the showering and decontamination facilities.
6. Removing asbestos in a way that minimizes release of fibers.
7. Packing, labeling, loading, transporting, and disposing of contaminated material in a way that minimizes exposure and contamination.
8. Emergency evacuation procedures, for medical or safety situations, to minimize the potential exposure to airborne asbestos fibers for emergency personnel, building occupants, and building environment.
9. Safety from accidents in the workspace, especially from electrical shocks, fall hazards associated with scaffolding, slippery surfaces, and entanglements in loose hoses and equipment.
10. Provisions for effective supervision, air monitoring and personnel monitoring for exposure during the work.
11. Engineering controls that minimize exposure to fibers within the workspace.

12. The asbestos abatement contractor shall provide a 24-hour fire watch throughout the entire term of the project, to protect against fire and unauthorized entry into the workspace. Fire watch shall be performed by an individual who is a certified asbestos worker capable of entering the Work Area for regular inspections.
- D. Provide an Asbestos Handler Supervisor to provide continuous supervision of all work, and to be responsible for the following:
1. Ensure that individuals are using proper personal protective equipment, are trained in its use and hold valid NYCDEP and NYSDOL Asbestos Handler certificates
 2. Maintain entry log records and ensure that they are recorded in accordance with the provisions of Title 15, Chapter 1 of RCNY and NYSDOL ICR 56.
 3. Surveillance of the Work Areas at a minimum of once per work shift or as required by Title 15, Chapter 1 of RCNY and NYSDOL ICR 56 -7.3, to ensure the integrity of work place isolation, negative pressure equipment and workers personal protective equipment is not torn or ripped and that respiratory protection is worn at all times.
 4. Ensure that sufficient personal protective equipment is stored in the clean room.
 5. Take precautions to prevent heat stress. Precautions include, but are not limited to, selecting lightweight protective clothing, reducing the work rate, and providing adequate fluid breaks.
 6. Perform work area inspection with project monitor prior to the commencement of final clearance air monitoring.
 7. The asbestos abatement contractor shall retain the asbestos handler supervisor to perform a visual inspection prior to the post-abatement clearance air monitoring to confirm that all containerized waste has been removed from work and holding areas and there is no visible ACM debris or residue on or about all abated surfaces.
- E. ENGINEERING CONTROLS
1. The 8-hour time weighted average airborne concentration of fibers to which any passerby may be exposed shall not exceed 0.01 fibers per cubic centimeter of air when fibers have a physical dimension longer than 5 micrometers as determined by the method prescribed in these Specifications.
 2. All asbestos projects shall utilize negative pressure ventilation equipment.
 - a. The asbestos abatement contractor shall use a manometer to document the pressure differential. The asbestos abatement contractor shall install and make the manometer operational once the negative pressure has

been established in the work area. Magnahelic manometers shall be calibrated at least every six months and a copy of the current calibration certification shall be available at the work site.

3. Negative pressure ventilation equipment shall be installed and operated to provide at least one air change in the work area every 15 minutes. Where there are no floor or wall barriers because floor or wall material is being abated, there shall be at least one air change in the work area every ten minutes.
4. The negative pressure ventilation equipment shall operate continuously, 24 hours a day, from the establishment of isolation barriers through successful clearance air monitoring. If such equipment shuts off, adjacent areas shall be monitored for asbestos fibers.
5. A static negative air pressure of 0.02 inches (minimum) water column shall be maintained at all times in the work place during abatement to ensure that contaminated air in the Work Area does not filter back to uncontaminated areas.
6. If the contaminated area of an asbestos project covers the entire floor of the affected building, or an area greater than 15,000 square feet on any given floor, the installation of a negative air cut off switch or switches shall be required at a single location outside the work place, such as inside a stairwell, or at a secured location in the ground floor lobby when conditions warrant. The required switch or switches shall be installed by a licensed electrician pursuant to a permit issued by the Department of Buildings. If negative pressure ventilation equipment is used on multiple floors, the cut off switch shall be able to turn off the equipment on all floors.
7. On loss of negative pressure or electric power to the negative pressure ventilating units, abatement shall stop immediately and shall not resume until power is restored and negative pressure ventilation equipment is operating again.
8. Negative pressure ventilation equipment shall be exhausted to the outside of the building away from occupied areas.
 - a. All openings (including but not limited to operable windows, doors, vents, air intakes or exhausts of any mechanical devices) less than 15 feet from the exterior exhaust duct termination location shall be plasticized with two layers of fire retardant 6-mil polyethylene sheeting, or a second negative pressure ventilation unit with the primary unit's capacity shall be connected in series prior to exhausting to the outside.
 - b. Negative pressure ventilation equipment shall exhaust away from areas accessible to the public.

- c. All ducting shall be sealed and braced or supported to maintain airtight joints. Ducts shall be reinforced and shall be installed so as to prevent breakage. Damage to ducts must be repaired immediately.
9. Where ducting to the outside is not possible, a second negative pressure ventilation unit compatible with the primary unit's capacity shall be connected in series. The area receiving the exhaust shall have sufficient, non-recycling exhaust capacity to the outside of the structure.
10. In the event that there is a failure of the containment system or a breach in the Isolation Barriers, all abatement work will cease and the asbestos abatement contractor will immediately correct the condition. Abatement work will not resume until the Work Area has been smoke tested by the third party laboratory and approved by the Construction Project Manager.

F. LOCKDOWN ENCAPSULATION PROCEDURES

1. The following procedures shall be followed to seal in non-visible residue while conducting lockdown encapsulation on all surfaces from which ACM has not been removed:
 - a. Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 USEPA Contract shall be used for lockdown encapsulation.
 - b. The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon unless reviewed and approved by DEP.
 - c. Latex paint with solids content greater than 15 percent shall be considered a lockdown sealant for coating all non-metallic surfaces.
 - d. Encapsulants shall be applied using airless spray equipment. Spraying is to occur at the lowest pressure range possible to minimize fiber release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.
 - e. The cleaned layer of the surface barriers shall be removed from walls and floors.

The isolation barriers shall remain in place throughout cleanup. Decontamination enclosure systems shall remain in place and be utilized. A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.

1.07 NOTIFICATIONS, PERMITS, WARNING SIGNS, LABELS, AND POSTERS

- A. The asbestos abatement contractor shall submit an Asbestos Project Notification (ACP-7) to the NYCDEP listing each work area within the building separately one week in advance of the start of work.
- B. The asbestos abatement contractor shall obtain an asbestos abatement permit authorizing the performance of construction work as required for asbestos projects involving one or more of the following activities:
 - 1. Obstruction of an exit door leading to an exit stair or the exterior of the building;
 - 2. Obstruction of an exterior fire escape or access to that fire escape;
 - 3. Obstruction of a fire-rated corridor leading to an exit door;
 - 4. Removal of handrails in an exit stair or ramp;
 - 5. Removal or dismantling of any fire alarm system component including any fire alarm-initiating device (e.g., smoke detectors, manual pull station);
 - 6. Removal or dismantling of any exit sign or any component of the exit lighting system, including photo luminescent exit path markings;
 - 7. Removal or dismantling of any part of a sprinkler system including piping or sprinkler heads;
 - 8. Removal or dismantling of any part of a standpipe system including fire pumps or valves;
 - 9. Removal of any non-load bearing / non-fire-rated wall (greater than 45 square feet or 50 percent of a given wall);
 - 10. Any plumbing work other than the repair or replacement of plumbing fixtures;
 - 11. Removal of any fire-resistance rated portions of a wall, ceiling, floor, door, corridor, partition, or structural element enclosure including spray-on fire resistance rated materials;
 - 12. Removal of any fire damper, smoke damper, fire stopping material, fire blocking, or draft stopping within fire-resistance rated assemblies or within concealed spaces;
 - 13. Any work that otherwise requires a permit from the DOB (full demolitions, alterations, renovations, modifications or plumbing work).

- C. The asbestos abatement contractor shall provide a floor plan showing the areas of the building under abatement and the location of all fire exits in said areas. It shall be prominently posted in the building lobby or comparable location, along with a notice stating the location within the building of the negative air cutoff switch, if applicable.
- D. The asbestos abatement contractor shall submit, as required, an asbestos abatement permit due to one or more of the activities listed in 1.07 (B) (1-8) and (B) (13) of this specification. The asbestos abatement contractor is responsible for submitting, with an asbestos project notification, a work place safety plan (WPSP) and any other applicable construction documents. These documents must be prepared by a registered design professional.
- E. A WPSP is not required for projects requiring an asbestos abatement permit due to one or more of the activities listed in 1.07 (B) (9-12) of this specification. The asbestos abatement contractor shall submit, together with the asbestos project notification, all applicable asbestos abatement permit construction documents.
- F. The asbestos abatement contractor shall retain a Registered Design Professional to perform the inspections required pursuant to Title 28 of the Administrative Code, including but not limited to special inspections required by Chapter 17 of the Building Code, as follows:
 - 1. A final inspection shall be performed by a registered design professional retained by the asbestos abatement contractor after all work authorized by the asbestos abatement permit is completed. The person performing the inspection shall note all failures to comply with the provisions of the Building Code or approved asbestos abatement permit and shall promptly notify the City of New York in writing. All defects noted in such inspection shall be corrected. The final inspection report shall either:
 - a. Confirm:
 - (1) That the construction work is complete, including the reinstallation or reactivation of any building fire safety or life safety component.
 - (2) That any defects previously noted have been corrected.
 - (3) That all required inspections were performed.
 - (4) That the work is in substantial compliance with the approved asbestos abatement permit construction documents, the Building Code, and other applicable laws and rules.
 - b. Confirm:

- (1) That the construction work does not return the building (or portion thereof) affected by the abatement project to a condition compliant with the building code and other applicable laws and rules, but that the registered design professional has reviewed an application for asbestos abatement permit construction documents approval that has been approved by the department of buildings, and the subsequent scope of work as approved will, upon completion, render all areas affected by the asbestos project in full compliance with the building code and all applicable laws and rules.
 - (2) That any defects previously noted that are not addressed by the subsequent scope of work as approved by the department of buildings, have been corrected.
 - (3) That all required inspections that are not addressed by the subsequent scope of work as approved by the department of buildings were performed.
 - (4) That all completed work pursuant to an asbestos abatement permit is in substantial compliance with the approved asbestos abatement permit construction documents.
- G. The asbestos abatement contractor shall provide the final inspection reports to be filed with DEP on A-TR1 form. Records of final inspections made by registered design professionals shall be submitted to the City of New York as part of the close out document package.
- H. Erect bilingual (English-Spanish) warning signs around the work space and at every point of potential entry from the outside and at main entrance to building which can be viewed by the public without obstruction, in accordance with OSHA 29 CFR 1926.1101 (K) (Sign Specifications) and Title 15, Chapter 1 of RCNY. The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the size of the lettering shall be no less than OSHA requirements.
- I. Provide the required labels for all polyethylene bags and all drums utilized to transport contaminated material to the landfill in accordance with OSHA 29 CFR 1926.1101 (K)(2) and by 49 CFR Parts 171 and 172 of the Department of Transportation regulations.
- J. Provide any other signs, labels, warnings, and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. Post in a prominent and convenient place for the workers a copy of the latest applicable regulations from OSHA, EPA, NIOSH, State of New York and New York City and any additional items mandated for posting by the aforementioned regulations.
- K. Furnish all permits, variances and notices required to perform the Work.

1.08 EMERGENCY PRECAUTIONS

- A. Establish emergency and fire exits from the Work Area. The clean side of all emergency exits shall be equipped with two full sets of protective clothing and respirators at all times.
- B. Notify local medical emergency personnel, both ambulance crews and hospital emergency room staff prior to commencement of abatement operations as to the possibility of having to handle contaminated or injured workmen, and shall be advised on safe decontamination.
- C. Prepare to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated immediately for decontamination. When an injury occurs, precautions shall be taken to reduce airborne fiber concentrations (i.e., misting of the air with water) until the injured person has been removed from the Work Area.
- D. Notify, before actual removal of the asbestos material, the local police and fire departments to the danger of entering the Work Area. Asbestos abatement contractor shall make every effort to help these agencies form plans of action should their personnel need to enter the contaminated area.

1.08 SUBMITTALS

- A. Pre-Construction Submittals:
 - 1. Attend a pre-construction meeting scheduled by the City of New York Department of Design and Construction. This meeting shall also be attended by a designated representative of the City of New York third party air monitoring firm, facility manager and the Construction Project Manager. At this meeting, the asbestos abatement contractor shall present three copies of the following items, bound and indexed. The detailed plan of action must be submitted at least five (5) days prior to the pre-construction meeting.
 - a. Asbestos abatement contractor's scope of work, work plan and schedule.
 - b. Asbestos project notifications, approved variances and plans to Government Agencies.
 - c. Copies of Permits, clearance and licenses if required.
 - d. Schedules: the asbestos abatement contractor shall provide to the Construction Project Manager a copy of the following schedules for approval. Once approved, schedules shall be maintained and updated as received. Asbestos abatement contractor shall post a copy of all schedules at the site:

- (1) A construction schedule stating critical dates of the project including, but not limited to, mobilization, Work Area preparation, demolition, gross removal, fine cleaning, encapsulation, inspections, clearance monitoring, and phase of refinishing and final inspections. The schedule shall be updated biweekly, at a minimum.
 - (2) A schedule of staffing stating number of workers per shift per activity, name and number of supervisor(s) per shift, shifts per day, and total days to be worked.
 - (3) Submit all changes in schedule or staffing to the Construction Project Manager prior to implementation.
 - (4) A schedule of equipment to be used including numbers and types of all major equipment such as HEPA Air Filtration Units, HEPA-vacuums, airless sprayers, Water Atomizing Devices and Type "C" compressors.
- e. A written plan and shop drawings for preparation of work site and decontamination chamber.
 - f. Description of protective clothing and approved respirator to be used, make, model, NIOSH approval numbers.
 - g. Delineation of responsibility of work site supervision, including competent person, with names, resumes, and home telephone numbers.
 - h. Explanation of decontamination sequence and isolation techniques.
 - i. Description of specific equipment to be utilized, including make and model number of air filtration devices, vacuums, sprayers, etc.
 - j. Description of any prepared methods, procedures, techniques, or equipment other than those specified in the Contract Documents.
 - k. Explanation of the handling of asbestos contaminated wastes including EPA and NYCDEP identification numbers of Waste Hauler.
 - l. Description of the final clean-up procedures to be used.
 - m. Name and qualifications of asbestos abatement contractor's Air Monitor including AIHA accreditation, and proof of NIOSH PAT and NIST/NVLAP Bulk Quality Assurance Proficiency of OSHA samples for approval by the City of New York Department of Design and Construction.

- n. Written description of emergency procedures to be followed in case of injury or fire. This section must include evacuation procedures, source of medical assistance (name and telephone number) and procedures to be used for access by medical personnel (examples: first aid squad and physician). NOTE: Necessary Emergency Procedures Shall Take Priority Over All Other Requirements of These Specifications.
- o. 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: Asbestos abatement contractor shall submit a list of the persons who will be employed by him in the removal work. Present evidence that workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.
- q. Logs: Specimen copies of daily progress log, visitor's log, and disposal log.
 - (1) The asbestos abatement contractor shall provide a permanently bound log book of minimum 8-1/2" x 11" size at the entrance to the Worker and Waste Decontamination enclosure system as hereinafter specified. Log book shall contain on title page the project name, name, address and phone number of Environmental Control Representative; name, address and phone number of asbestos abatement contractor; name, address and phone number of asbestos abatement contractor and City's air testing entity; emergency numbers including, but not limited to local Fire/Rescue Department. Log book shall contain a list of personnel approved by the laboratory for entry into the Work Area.
 - (2) All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted. Any significant events occurring during the abatement project shall be entered into the log. Upon completion of the job, the Asbestos abatement contractor shall submit a copy of the logbook containing a day-to-day record of personnel log entries countersigned by the Construction Project Manager every day.
- r. Worker's Acknowledgments: Submit statements signed by each employee that the employee has received training in the proper handling of ACM, understands the health implications and risks involved; and

understands the use and limitations of the respiratory equipment to be used.

- B. Submit copies of the following items to the Construction Project Manager during the work:
1. Security and safety logs showing names of person entering workspace, date and time of entry and exit, record of any accident, emergency evacuation, and any other safety and/or health incident.
 2. Progress logs showing the number of workers, supervisors, hours of work and tasks completed shall be submitted daily to the Construction Project Manager.
 3. Floor plans indicating asbestos abatement asbestos abatement contractor's current work progress shall be submitted for review by the Construction Project Manager at weekly progress meetings.
 4. All asbestos abatement contractors' air monitoring and inspection results.

C. Project Closeout Submittals:

Upon completion of the project and as a condition of acceptance, the asbestos abatement contractor shall present two copies of the following items, bound and indexed:

1. Lien Waivers from asbestos abatement contractor, Sub-asbestos abatement contractors and Suppliers,
2. Daily OSHA air monitoring results,
3. All Waste Manifests (Asbestos and Construction Debris), seals and disposal logs,
4. Field Sign-In/Sign-Out Logs for every shift,
5. Copies of all Building Department Forms and Permits,
6. A Letter of Compliance stating that all the work on this project was performed in accordance with the Specifications and all applicable Federal, State and Local regulations,
7. All Warranties as stated in the Specifications,
 - a. Fully executed disposal certificates and transportation manifest.
8. Project Record: The asbestos abatement contractor shall maintain a project record for all small and large asbestos projects. During the project, the project record shall be kept on site at all times. Upon completion of the project, the

project record shall be maintained by City of New York (the building owner). The project record shall be submitted to the City of New York as part of the close out documents. The project record shall consist of:

- a. Copies of licenses of all asbestos abatement contractors involved in the project;
 - b. Copies of DEP and NYSDOL supervisor and handler certificates for all workers engaged in the project;
 - c. Copies of all project notifications and reports filed with DEP and NYSDOL for the project, with any amendments or variances;
 - d. Copies of all asbestos abatement permits, including associated approved plans and work place safety plan;
 - e. A copy of the air sampling log and all air sampling results;
 - f. A copy of the abatement asbestos abatement contractor's daily log book;
 - g. All data related to bulk sampling including the results of any asbestos surveys performed by an asbestos investigator;
 - h. Copies of all asbestos waste manifests;
 - i. A copy of all Project Monitor's Reports (ACP-15).
 - j. A copy of each ATR-1 Form completed for the asbestos project (if required).
 - k. A copy of each Asbestos Project Conditional Closeout Report (ACP-20).
 - l. A copy of the Asbestos Project Completion Form (ACP-21).
9. The asbestos abatement contractor shall submit one of the following certifications to the DOB, with a copy provided to the City of New York:
- a. Asbestos Project Completion Form. If an asbestos project has been performed, a copy of the asbestos project completion form issued by DEP shall be submitted to DOB, with a copy being provided to the City of New York, prior to the issuance of a DOB permit and to any amendment of the underlying construction document approval which increases the scope of the project to include (a) work area(s) not previously covered.
 - b. An Asbestos Project Conditional Close-out Form. If an asbestos project has been performed a copy of the asbestos project conditional close-out form issued by DEP shall be submitted to DOB, with a copy being

provided to the City of New York, prior to the issuance of a DOB permit and to any amendment of the underlying construction document approval which increases the scope of the project to include (a) work area(s) not previously covered.

1.10 QUALITY ASSURANCE

- A. All work required for the completion of this project or called for in this Specification must be executed in a workmanlike manner by using the appropriate methods established by regulatory requirements and/or industrial standards. All workmanship or work methods are subject to review and acceptance by the Construction Project Manager. Throughout the Specification, reference is made to codes and standards which establish qualities, levels or types of workmanship which will be considered acceptable. It is the asbestos abatement contractor's responsibility to comply with these codes and standards during the execution of this work.
- B. All materials and equipment required or consumed during the work of this Contract must meet the minimum acceptable criteria established by codes and standards referenced elsewhere in this Specification. Materials and equipment must be submitted for prior approval as part of the asbestos abatement contractor's "Shop Drawings".
- C. It is the asbestos abatement contractor's responsibility, when so required by the Specification or upon written request from the Commissioner or his representative to furnish all required proof that workmanship, materials and/or equipment meet or exceed the codes and standards referenced. Such proof shall be in the form requested, typically a certified report or test conducted by a testing entity approved for that purpose by the City of New York.
- D. The asbestos abatement contractor shall furnish proof that employees working under his supervision have had instruction on the dangers of asbestos exposure, on respirator use, decontamination, and OSHA regulations. This proof shall be in the form of a notarized affidavit to the effect that the above requirements have been satisfied.
- E. The asbestos abatement contractor will have at all times in his possession and in view at the job site the OSHA regulations 29 CFR 1910.1001, and 1926.1101 Asbestos, and Environmental Protection Agency 40 CFR, Part 61, subpart B: National Emission Standard for asbestos, asbestos stripping, work practices and disposal of asbestos waste. He shall also have one copy of NYC Title 15, Chapter 1 of RCNY and NYS DOL ICR 56 at the job site at all times.
- F. Familiarity with Pertinent Codes and Standards: In procuring all items used in this work, it is the asbestos abatement contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements, and are suitable for their intended use.

- G. Rejection of Non Complying Items: The Commissioner reserves the right to reject items incorporated into the work that fail to meet the specified minimum requirements. The Commissioner further reserves the right, and without prejudice to other recourse that maybe taken, to accept non-complying items subject to an adjustment in the Contract amount as approved by the City.
- H. Applicable Regulations, Codes and Standards: Applicable standards listed in these Specifications include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:
1. American National Standards Institute (ANSI)
(Successor to USASI and ASA)
25 West 43rd Street (between 5th and 6th Avenue) 4th Floor
New York, NY 10036
212-642-4900
 2. American Society for Testing and Materials (ASTM)
100 Bar Harbor Drive
West Conshohocken, PA 19428-2959
610-832-9500
 3. National Institute for Occupational Safety and Health (NIOSH)
Robert A. Taft Laboratory
4676 Columbia Pkwy
Mailstop R12 Cincinnati, Ohio 45226
513-841-4428
 4. National Electrical Code (NEC)
See NFPA
 5. National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, Massachusetts 02169-7471
617-770-3000
 6. New York City Fire Department (FDNY)
9 Metrotech Center
Brooklyn, NY 11201-5431
718-999-2117
 7. New York City Department of Buildings (NYC DOB)
Enforcement Division
280 Broadway, New York, New York 10007
212- 566-2850
 8. New York City Department of Environmental Protection (NYCDEP)
Bureau of Environmental Compliance

Asbestos Control Program
59-17 Junction Boulevard, 8th Floor
Corona, New York 11368
718-595-3682

9. New York City Department of Health and Mental Hygiene (NYC DOHMH)
Environmental Investigation
125 Worth Street
New York, New York 10013
212-442-3372
 10. New York State Department of Labor (NYSDOL)
Division of Safety and Health
Engineering Services Unit
State Office Building Campus
Albany, New York 12240-0010
 11. New York City Department of Sanitation
125 Worth Street, Room 714
New York, New York 10013
212-566-1066
 12. Occupational Safety and Health Administration (OSHA)
Region II - Regional Office
201 Varick Street, Room 908
New York, New York 10014
212-337-2378
 13. United States Environmental Protection Agency (EPA or USEPA)
Region II
Asbestos NESHAPS Contact
Air and Waste Management Division
(Air Compliance Branch) – USEPA
290 Broadway, 21st Floor
New York, New York 10007-1866
212-637-3660
- I. Post all applicable regulations in a conspicuous place at the job site. Assure that the regulations are not altered, defaced or covered by other materials. One copy of each regulation must also be kept at the Asbestos abatement contractor's office.

1.11 CITY/ASBESTOS ABATEMENT CONTRACTOR RESPONSIBILITIES

- A. The normal occupants of the Work Areas will be relocated by the City prior to the performance of the abatement work and returned there to at the conclusion of the abatement work, at no cost to the asbestos abatement contractor. However, the asbestos abatement contractor shall protect all furniture and equipment in the Work

Areas in a manner as hereinafter specified. In addition, the asbestos abatement contractor shall perform the work of this Contract in a manner that will be least disruptive to the normal use of the non-Work Areas in the building.

- B. Asbestos abatement contractor shall be responsible for cleaning all portable items not specifically addressed by the Facility, in the Work Areas, or dispose of same as asbestos contaminated waste.
- C. Facility to provide asbestos abatement contractor with a list of items that cannot be removed and need special attention.
- D. Facility to stop all deliveries that may be scheduled to the Work Area while work is in progress.
- E. Facilities to have authorized personnel on site at all times or supply the asbestos abatement contractor with means of contacting such personnel without unreasonable delay. Such personnel shall have access to all areas, have knowledge of electrical, and air handling equipment. Such personnel shall assist the asbestos abatement contractor in case of any power failure or breakdown to shut down air supply systems, to reset and control all protective systems such as alarms, sprinklers, locks, etc. The Facility shall ensure no active air handling systems are operating within the Work Area.
- F. City will not occupy the portions of the building, in which work is being performed during the entire asbestos removal operation, including completion of clean up.
- G. Asbestos abatement contractor shall provide a plan for 24 hour job security both for prevention of theft and for barring entry of curious but unprotected personnel into Work Areas.
- H. Asbestos abatement contractor shall provide surveillance by a fire watch and set forth procedures to be taken for the safety of building occupants in the event of an emergency, in accordance with the WPSP.
- I. Should the failure of any utility occur, the City will not be responsible to the asbestos abatement contractor for loss of time or any other expense incurred.
- J. Facility will be responsible to notify the asbestos abatement contractor of any planned electrical power shutdowns in order to ensure that there are no power interruptions in the negative air pressure systems.
- K. Asbestos abatement contractor shall remove all flammable materials from the work area and all sources of ignition (including but not limited to pilot lights) shall be extinguished.
- L. Asbestos abatement contractor shall require a competent person (as defined in OSHA 1926.1101) to perform the following functions and to be on-site continuously for the duration of the project:

1. Monitor the set up of the Work Area enclosure and ensure its integrity.
2. Control entry and exit into the work enclosure.
3. Ensure that employees are adequately trained in the use of engineering controls, proper work practices, proper personal protective equipment and in decontamination procedures.
4. Insure that employees use proper engineering controls, proper work practices, proper personal protective equipment and proper decontamination procedures.
5. The competent person (as defined in OSHA1926.1101) shall check for rips and tears in work suits, and ensure that they are mended immediately or replaced.

1.12 USE OF BUILDING FACILITIES

- A. City shall make available to the asbestos abatement contractor, from existing outlets and supplies, all reasonably required amounts of water and electric power at no charge.
- B. Electric power to all Work Areas shall be shut down and locked out except for electrical equipment that must remain in service. Safe temporary power and lighting shall be provided by asbestos abatement contractor in accordance with applicable codes. All power to Work Areas shall be brought in from outside the area through ground-fault interrupter circuits installed at the source. Stationary electrical equipment within the Work Area, which must remain in service, shall be adequately protected, enclosed and ventilated. The Facility will identify all electric lines that must remain in service. Asbestos abatement contractor shall protect all lines.
- C. Asbestos abatement contractor shall provide, at his own expense, all electrical, water, and waste connections, tie-ins, extensions, and construction materials, supplies, etc. All water tie-ins shall be hard piped with polyethylene or copper piping. At the end of each shift, asbestos abatement contractor shall disconnect all hoses within the work zone and place in equipment room of the worker decontamination unit. Asbestos abatement contractor shall ensure positive shutoff of all water to Work Area during non-working hours.
- D. Utilities:
 1. General:

All temporary facilities required to be installed, shall be subject to the approval of the Commissioner. Prior to starting the work at any site; specify clearly the temporary locations of facilities preferably with sketches and submit the same to the Construction Project Manager for approval.
 2. Water:

The Department of Design and Construction will furnish all water needed for construction, at no cost to the asbestos abatement contractor in buildings under

their jurisdiction. All temporary plumbing or adaptations to supply the needs of the Work Area shall be installed and removed by the asbestos abatement contractor and the cost thereof included in the Lump Sum price for abatement work. Shower water for the decontamination unit shall be provided hot. Heating of water, if necessary, shall be provided by the asbestos abatement contractor.

3. Electricity:

The Department of Design and Construction will furnish all electricity needed for construction, at no cost to the asbestos abatement contractor in buildings under their jurisdiction. All temporary electrical work or adaptations to supply the needs of the Work Area shall be installed and removed by the asbestos abatement contractor and the cost thereof included in the Lump Sum price for abatement work.

In leased spaces, arrangements for water supplies and electricity must be made with the landlord. However, all such arrangements must be made through and are subject to approval of the Department of Design and Construction. Utilities will be provided at no cost to the Asbestos abatement contractor. However, it is the asbestos abatement contractor's (or the General contractor's) responsibility to furnish and install a suitable distribution system to the Work Area. This system will be provided at no cost to the City.

A dedicated power supply for the negative pressure ventilating units shall be utilized. The negative air equipment shall be on a ground fault circuit interrupter (GFCI) protected circuit separate from the remainder of the work area temporary power circuits.

E. Asbestos abatement contractor shall shut down and lock out all electric power to all work areas except for electrical equipment that must remain in service. Safe temporary power and lighting shall be provided in accordance with all applicable codes. Existing light sources (e.g., house lights) shall not be utilized. All power to work areas shall be brought in from outside the area through ground-fault circuit interrupter at the source.

1. If electrical circuits, machinery, and other electrical systems in or passing though the work area must stay in operation due to health and safety requirements, the following precautions must be taken:

a. All unprotected cables, except low-voltage (less than 24 volts) communication and control system cables, panel boxes of cables and joints in live conduit that run through the work area shall be covered with three (3) independent layers of six (6) mil fire retardant polyethylene. Each layer shall be individually duct taped and sealed. All three (3) layers of polyethylene sheeting shall be left in place until satisfactory clearance air sampling results have been obtained.

b. Any energized circuits remaining in the work area shall be posted with a minimum two (2) inch high lettering warning sign which reads: DANGER

LIVE ELECTRICAL - KEEP CLEAR. A sign shall be placed on all live covered barriers at a maximum of ten (10) foot intervals. These signs shall be posted in sufficient numbers to warn all persons authorized to enter the work area of the existence of the energized circuits.

2. Any source of emergency lighting which is temporarily blocked as a result of work place preparation shall be replaced for the duration of the project by battery operated or temporary exit signs, exit lights, or photo luminescent path markings.
- F. Asbestos abatement contractor shall provide a separate temporary electric panel board to power asbestos abatement contractor's equipment. The Facility will designate an existing electrical source in proximity to the Work Area. Asbestos abatement contractor's licensed electrician shall provide temporary tie-in via cable, outlet boxes, junction boxes, receptacles and lights, all with ground fault interruption. At no time shall extension cords greater than 50-feet in length be allowed. All temporary electrical installation shall be in accordance with OSHA regulations. The electric shut down for power panel tie-in will be on off-hours and must be coordinated with the Facility. Asbestos abatement contractor shall provide to the City a specification and drawing outlining his power requirements at the pre-construction meeting.
 - G. Additional electrical equipment (i.e., transformers, etc.), which is necessary due to the lack of existing power on the floor, shall be at the asbestos abatement contractor's expense.
 - H. Asbestos abatement contractor shall provide fire protection in accordance with all State and Local fire codes.
 - I. Sprinklers, standpipes, and other fire suppression systems shall remain in service and shall not be plasticized.
 - J. When temporary service lines are no longer required, they shall be removed by the asbestos abatement contractor. Any parts of the permanent service lines, grounds and buildings, disturbed or damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the asbestos abatement contractor. Senior Stationary Engineer will inspect and test all switches, controls, gauges, etc. and shall submit a list to the Construction Project Manager of any equipment damaged by the asbestos abatement contractor.
 - K. Asbestos abatement contractor shall supply hot shower water necessary for use in the decontamination unit.

1.13 USE OF THE PREMISES

- A. Asbestos abatement contractor shall confine his apparatus, the storage of materials, and supplies, and the operation of his workmen to limits established by law, ordinances, and the directions of the Construction Project Manager and the Facility. All flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Facility.
- B. Asbestos abatement contractor shall assure that no exits from the building are obstructed, that appropriate safety barriers are established to prevent access, and that Work Areas are kept neat, clean, and safe.
- C. Asbestos abatement contractor shall maintain exits from the work area or alternative exits shall be established, in accordance with section 1027 of the New York City Fire Code. Exits shall be checked at the beginning and end of each work shift against blockage or impediments to exiting.
- D. If the openings of temporary structural partitions related to abatement work areas block egress, the partition shall consist of two sheets of fire retardant 6-mil plastic, prominently marked as an exit with photo luminescent paint or signage. Cutting tools (e.g., knife, razor) shall be attached to the work area side of the sheeting for use in the event that the barrier must be cut open to allow egress.
- E. All surrounding work, fixtures, soil lines, drains, water lines, gas pipes, electrical conduit, wires, utilities, duct work railings, shrubbery, landscaping, etc. which are to remain in place shall be carefully protected and, if disturbed or damaged, shall be repaired or replaced as directed by the City, at no additional cost.
- F. All routes through the building to be used by the asbestos abatement contractor shall first be approved by the Construction Project Manager and the Facility.
- G. Attention is specifically drawn to the fact that other asbestos abatement contractors, performing the work of other Contracts, may be (or are) brought upon any of the work sites of this Contract. Therefore, the asbestos abatement contractor shall not have exclusive rights to any site of his work and shall fully cooperate and coordinate his work with the work of other asbestos abatement contractors who may be on (or are on) any site of the work of this Contract. Regulated area exempted.
- H. Temporary toilet facilities must be provided by the asbestos abatement contractor on the site. Coordinate location of facilities with Construction Project Manager. No toilet facilities will be allowed in the Work Area.

1.14 PROTECTION AND DAMAGE

- A. The asbestos abatement contractor is responsible to cover all furniture and equipment that cannot be removed from Work Areas. Moveable furniture and equipment will be removed from Work Areas by asbestos abatement contractor prior to start of work and returned upon successful completion of the final air testing. At the conclusion of the

work (after clearance level of air testing reaches the acceptable limit), the asbestos abatement contractor will remove all plastic covering from the walls, floors, furniture, equipment and reinstall furniture and equipment in the cleaned Work Area. The asbestos abatement contractor shall remove all shades, curtains and drapes from the Work Area, and reinstall the same following the final clean up.

- B. Prior to plasticizing, the proposed work areas shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning methods. Methods that raise dust, such as sweeping or vacuuming with equipment not equipped with HEPA filters, are prohibited.
- C. Use rubber tired vehicles that use non-volatile fuels for conveying material inside building and provide temporary covering, as necessary, to protect floors.
- D. No materials or debris shall be thrown from windows or doors of the building. Building waste system shall NOT be used to remove refuse.
- E. Debris shall be removed from the work site daily. Premises shall be left neat and clean after each work shift, so that work may proceed the next regular workday without interruption. Limited bag storage may take place within the Work Area when approved by the Construction Project Manager.
- F. Protect floors and walls along removal routes from damage, wear and staining with contamination control flooring. All finished surfaces to be protected with Masonite or other rigid sheathing material.
- G. A preliminary inspection for pre-existing damage shall be conducted by asbestos abatement contractor and representative of the City before commencement of the project.

1.15 RESPIRATORY PROTECTION REQUIREMENTS

- A. Respiratory protection shall be worn by all individuals who may be exposed to asbestos fibers from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring in accordance with Regulations and these Specifications.
- B. Asbestos abatement contractor shall develop and implement a written respiratory protection program with required site-specific procedures and elements. The program shall be administered by a properly trained individual. The written respiratory protection program shall include the requirements set forth in OSHA Standard 29 CFR 1910.134, at a minimum.
- C. The Asbestos abatement contractor shall provide workers with individually issued and marked respiratory equipment. Respiratory equipment shall be suitable for the asbestos exposure level(s) in the Work Area(s), as specified in OSHA Standards 26 CFR 1910.134 and 29 CFR 1926.1101, NIOSH Standard 42 CFR 84, or as more stringently specified otherwise, herein.

- D. Where respirators with disposable filter parts are employed, the asbestos abatement contractor will provide sufficient filter parts for replacement as necessary or as required by the applicable regulation.
- E. All respiratory protection shall be NIOSH approved. All respiratory protection shall be provided by asbestos abatement contractor, and used by workers in conjunction with the written respiratory protection program.
- F. Asbestos abatement contractor shall provide respirators selected by an Industrial Hygienist that meet the following requirements:

Table 1. -- Assigned Protection Factors

Type of Respirator	Half mask	Full facepiece	Helmet/hood
1. Air-Purifying Respirator	³ 10	50
2. Powered Air-Purifying Respirator (PAPR)	50	1,000	⁴ 25/1,000
3. Supplied-Air Respirator (SAR) or Airline Respirator			
• Demand mode	10	50
• Continuous flow mode	50	1,000	⁴ 25/1,000
• Pressure-demand or other positive-pressure mode	50	1,000
4. Self-Contained Breathing Apparatus (SCBA)			
• Demand mode	10	50	50
• Pressure-demand or other positive-pressure mode (e.g., open/closed circuit)	10,000	10,000

Notes:

¹Employers may select respirators assigned for use in higher workplace concentrations of a hazardous substance for use at lower concentrations of that substance, or when required respirator use is independent of concentration.

²The assigned protection factors in Table 1 are only effective when the employer implements a continuing, effective respirator program as required by this section (29 CFR 1910.134), including training, fit testing, maintenance, and use requirements.

³This APF category includes filtering facepieces, and half masks with elastomeric facepieces.

⁴The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF of 1,000. This level of performance can best be demonstrated by performing a WPF or SWPF study or

equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators, and receive an APF of 25.

⁵These APFs do not apply to respirators used solely for escape. For escape respirators used in association with specific substances covered by 29 CFR 1910 subpart Z, employers must refer to the appropriate substance-specific standards in that subpart. Escape respirators for other IDLH atmospheres are specified by 29 CFR 1910.134 (d)(2)(ii).

G. Selection of high efficiency filters:

1. All high efficiency filters shall have a nominal efficiency rating of 100 (99.97-percent effective) when tested against 0.3-micrometer monodisperse diethylhexyl phthalate (DOP) particles.
2. Choose N-, R-, or P-series filters based upon the presence or absence of oil particles.
 - a. N-series filters shall only be used for non-oil solid and water based aerosols or fumes.
 - b. R- and P-series filters shall be used when oil aerosols or fumes (i.e., lubricants, cutting fluids, glycerin, etc.) are present. The R-series filters are oil resistant and the P-series filters are oil proof.
 - c. Follow filter manufacture recommendations.
3. If a vapor hazard exists, use an organic vapor cartridge in combination with the high efficiency filter.

H. Historical airborne fiber level data may serve as the basis for selection of the level of respiratory protection to be used for an abatement task. Historical data provided by the asbestos abatement contractor shall be based on personal air monitoring performed during work operations closely resembling the processes, type of material, control methods, work practices, and environmental conditions present at the site. Documentation of aforementioned results may be requested by the City and/or Third-Party Air Monitor for review. This will not relieve the asbestos abatement contractor from providing personal air monitoring to determine the time-weighted average (TWA) for the work under contract. The TWA shall be determined in accordance with 29 CFR 1926.1101.

I. At no time during actual removal operations shall half-mask air purifying respirators be allowed unless a full 8-hour TWA and excursion limit have been conducted, and reviewed by the Construction Project Manager. If the TWA and excursion limit have not been conducted, a Supplied-Air Respirator (SAR) or Airline Respirator or Self-Contained Breathing Apparatus (SCBA) must be used. Use of single use dust respirators is prohibited for the above respiratory protection.

- J. Workers shall be provided with personally issued and individually marked respirators. Respirators shall not be marked with any equipment that will alter the fit of the respirator in any way. Only waterproof identification markers shall be used.
- K. Asbestos abatement contractor shall ensure that the workers are qualitatively or quantitatively fit tested by an Industrial Hygienist initially and every 12 months thereafter with the type of respirator he/she will be using.
- L. Whenever the respirator design permits, workers shall perform the positive and negative air pressure fit test each time a respirator is worn. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.
- M. No facial hairs (beards) shall be permitted to be worn when wearing respiratory protection that requires a mask-to-face seal.
- N. If a worker wears glasses, a spectacle kit to fit their respirator shall be provided by the asbestos abatement contractor at the asbestos abatement contractor's expense.
- O. Respiratory protection maintenance and decontamination procedures shall meet the following requirements:
 - 1. Respiratory protection shall be inspected and decontaminated on a daily basis in accordance with OSHA 29 CFR 1910.134 (b); and
 - 2. High efficiency filters for negative pressure respirators shall be changed after each shower; and
 - 3. Respiratory protection shall be the last piece of worker protection equipment to be removed. Workers must wear respirators in the shower when going through decontamination procedures as stated in Section 3.03 and/or 3.04.
 - 4. Airline respirators with high efficiency filtered disconnect shall be disconnected in the equipment room and worn into the shower. Powered air-purifying respirator face pieces shall be worn into the shower. Filtered/power pack assemblies shall be decontaminated in accordance with manufacturers recommendations; and
 - 5. Respirators shall be stored in a dry place and in such a manner that the face-piece and exhalation valves are not distorted; and
 - 6. Organic solvents shall not be used for washing of respirators.
- P. Authorized visitors shall be provided with suitable respirators and instruction on the proper use of respirators whenever entering the Work Area. Qualitative fit test shall be done to ensure proper fit of respirator.

1.16 PROTECTIVE CLOTHING

- A. Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work. Provide to all workers, foremen, superintendents, authorized visitors and inspectors, protective disposable clothing consisting of full body coveralls, head covers, gloves and 18-inch high boot type covers or reusable footwear.
- B. In addition to personal protective equipment for workers, the asbestos abatement contractor shall make available at each worksite at least four (4) additional uniforms and required respiratory equipment each day for personnel who are authorized to inspect the work site. He/she shall also provide, for the duration of the work at any site involving a decontamination unit for worksite access, a lockable storage locker for use by the Construction Project Manager. In addition to respiratory masks for workers, the asbestos abatement contractor must have on hand at the beginning of each work day, at least four (4) masks each with two sets of fresh filters, for use by personnel who are authorized to inspect the worksite. The asbestos abatement contractor shall check for proper fit of the respirators of all City personnel authorized to enter the Work Area.
- C. Asbestos handlers involved in tent procedures shall wear two (2) disposable suits, including gloves, hood and footwear, and appropriate respiratory equipment. All street clothes shall be removed and stored in a clean room within the work site. The double layer personal protective equipment shall be used for installation of the tent and throughout the procedure, if a decontamination unit (with shower and clean room) is contiguous to the Work Area, only one (1) layer of disposable personal protective equipment shall be required; in this case, prior to exiting the tent the worker shall HEPA vacuum and wet clean the disposable suit.
- D. The outer disposable suit (if 2 suits are worn) shall be removed and remain in the tent upon exiting. Following the tent disposal and work site clean up the workers shall immediately proceed to a shower at the work site. The inner disposal unit and respirator shall be removed in the shower after appropriate wetting. The disposal clothing shall be disposed of as asbestos-containing waste material. The workers shall then fully and vigorously shower with supplied liquid bath soap, shampoo, and clean dry towels.
- E. Coveralls: provide disposable full-body coveralls and disposable head covers. Require that they be worn by all workers in the Work Area. Provide a sufficient number for all required changes for all workers in the Work Area.
- F. Boots: provide work boots with non-skid soles, and where required by OSHA, foot protection, for all workers. Provide boots at no cost to workers. Paint uppers of all boots yellow with waterproof enamel. Do not allow boots to be removed from the Work Area for any reason after being contaminated with ACM and/or dust.
- G. Hard Hats: provide hard hats as required by OSHA for all workers, and provide a minimum of four spares for Inspectors, visitors, etc. Label all hats with same warning label as used on disposal bags. Require hard hats to be worn at all times that work is in

progress that may cause potential head injury. Provide hard hats of the type with polyethylene strap suspension. Require hats to remain in the Work Area throughout the work. Thoroughly clean and decontaminate and bag hard hats prior to removing them from the Work Area at the end of the work.

- H. Goggles: provide eye protection (goggles) as required by OSHA for all workers involved in any activity that may potentially cause eye injury. Require them to be worn at all times during these activities. Thoroughly clean and decontaminate goggles before removing them from the Work Area.
- I. Gloves: provide work gloves to all workers, of the type dictated by the Work and OSHA Standards. Do not remove gloves from the Work Area. Dispose of as asbestos-asbestos contaminated waste at the end of the work. Gloves shall be worn at all times, except during Work Area Preparation activities that do not disturb ACM.
- J. Reusable footwear, hard hats and eye protection devices shall be left in the contaminated Equipment Room until the end of the Asbestos Abatement Work.
- K. Disposable protective clothing shall be discarded and disposed of as asbestos waste every time the wearer exits from the workspace to the outside through the decontamination facility.
- L. Respirators, disposable coveralls, head covers and foot covers shall be provided by the asbestos abatement contractor for the Facilities Representative, Construction Project Manager and any other authorized representative who may inspect the Work Area. Provide two respirators and six respirator filter changes per day.

1.17 AIR MONITORING - ASBESTOS ABATEMENT CONTRACTOR

- A. Asbestos abatement contractor shall employ a qualified industrial hygiene laboratory to analyze air samples in accordance with OSHA Regulations, 1926.1101 (Asbestos Standards for Construction) and New York City regulations.
- B. The industrial hygiene laboratory shall be a current proficient participant in the American Industrial Hygiene Association (AIHA) PAT Program. The laboratory identification number shall be submitted and approved by the City. The laboratory shall be accredited by the AIHA and New York State Department of Health Environmental Laboratory Approval Program (ELAP).
- C. Industrial hygiene laboratory shall also be a current proficient participant in the NIST/NVLAP Quality Assurance Program for the identification of bulk samples. Laboratory identification number shall be submitted to and approved by the City.
- D. Air monitoring responsibilities for the asbestos abatement contractor's employees, shall be performed by a representative of the industrial hygiene laboratory retained by the asbestos abatement contractor.

- E. Asbestos abatement contractor shall submit to the City all credentials of the designated (as defined in OSHA 1926.1101) and industrial hygiene laboratory representative for approval.
- F. Air monitoring and inspection shall be conducted by the Asbestos abatement contractor's competent person (as defined in OSHA 1926.1101).
- G. Continuous (daily or per shift) monitoring and inspection will include Work Area samples, personnel samples from the breathing zone of a worker to accurately determine the employees' 8-hour TWA (unless Type C respirators are used) and decontamination unit clean room samples.
- H. Work Area samples and employee personnel samples shall be taken using pumps whose flow rates can be determined to an accuracy of +5-percent, at a minimum of two liters per minute. This must be demonstrated at the job site.
- I. Sampling and analysis methods shall be per NIOSH 7400A.
- J. Test Reports:
 - 1. Promptly process and distribute one copy of the test results, to the Commissioner.
 - 2. Prompt reports are necessary so that if required, modifications to work methods and/or practices may be implemented as soon as possible.
 - 3. Asbestos abatement contractor shall by facsimile notify the Commissioner within 24 hours of the results of each test, followed by written notification within three days.
- K. Competent person shall conduct inspections and provide written reports daily. Inspections will include checking the standard operating procedures, engineering control systems, respiratory protection and decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project which may affect the health and safety of the people and environment.
- L. All costs for required air monitoring by the asbestos abatement contractor's competent person shall be borne by the asbestos abatement contractor.
- M. The City reserves the right to conduct air and surface dust sampling in conjunction with and separate from the Third-Party Air Monitor for the purposes of Quality Assurance.
- N. All samples shall be accompanied by a Chain of Custody Record that shall be submitted to the Construction Project Manager upon completion of analysis.

1.18 THIRD PARTY MONITORING AND LABORATORY

- A. The City of New York, at its own expense, will employ the services of an independent Third Party Air Monitoring Firm and Laboratory. The Third Party Air Monitor will perform air sampling activities and project monitoring at the Work Site.
- B. The Laboratory will perform analysis of air samples utilizing Phase Contrast Microscopy (PCM) and/or Transmission Electron Microscopy (TEM). This laboratory shall meet the standards stated in Paragraph 1.17. B.
- C. Observations will include, but not be limited to, checking the standard operating procedures, engineering control systems, respiratory protection, decontamination systems, packaging and disposal of asbestos waste, and any other aspects of the project that may affect the health and safety of the environment, Asbestos abatement contractor, and/or facility occupants.
- D. The Third Party Air Monitoring Firm and the designated Project Monitor shall have access to all areas of the asbestos removal project at all times and shall continuously inspect and monitor the performance of the asbestos abatement contractor to verify that said performance complies with this Specification. The Third-Party Air Monitor shall be on site throughout the entire abatement operation.
- E. The City of New York will be responsible for costs incurred with the Third Party Air Monitoring Firm and laboratory work. Any subsequent additional testing required due to limits exceeded during initial testing shall be paid for by the Asbestos abatement contractor.
- F. At a minimum, air sampling shall be conducted in accordance with the following schedule:

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

Note: TEM is acceptable wherever PCM is required.

- G. The number of air samples required per stage of abatement and size of abatement project is listed in the table below:

		Pre-Abatement	During Abatement	Post Abatement
Large Asbestos Projects				
1.	Full Containment	10	5	10
2.	Glovebag inside Tent	5 ^a	5 ^a	5 ^a

3.	Exterior Foam and Vertical Surfaces	-	5 ^c	5 ^d
4.	Interior Foam	10	5 ^c	10 ^d
Small Asbestos Projects				
1.	Full Containment	6	3	6
2.	Glovebag inside Tent	3 ^b	3 ^b	3 ^b
3.	Tent	3 ^b	3 ^b	3 ^b
4.	Exterior Foam and Vertical Surfaces	-	3 ^c	3 ^d
5.	Interior Foam	6	3 ^c	6 ^d
Minor Projects				
1.	Glovebag inside Tent	-	-	1 ^d
2.	Tent	-	-	1 ^d
3.	Exterior Foam and Vertical Surfaces	-	-	1 ^d
4.	Interior Foam	-	-	1 ^d

Notes:

- a. if more than three (3) tents then two (2) samples required per enclosure.
 - b. if more than three (3) tents then one (1) sample required per enclosure.
 - c. samples shall be taken within the work area(s).
 - d. area sampling is required only if:
 - visible emissions are detected during the project
 - during-abatement area sampling results exceeded 0.01 f/cc or the pre-abatement area sampling result(s) for interior projects where applicable.
 - work area to be reoccupied is an interior space at a school, healthcare, or daycare facility.
- H. Prior to commencement of abatement activities, the Third Party Air Monitoring Firm will collect a minimum number of area samples inside each homogeneous work area.
1. Samples will be taken during normal occupancy activities and circumstances at the work site.
 2. Samplers shall be located within the proposed work area and at all proposed isolation barrier locations.
 3. Samples shall be analyzed using PCM.
 4. The number of samples to be collected will be determined by the size of the project and the abatement methods to be utilized.
- I. Frequency and duration of the air sampling during abatement shall be representative of the actual conditions during the abatement. The size of the asbestos project will be a factor in the number of samples required to monitor the abatement activities. The following minimum schedule of samples shall be required daily.

1. For large asbestos projects employing full containment, area air sampling shall be performed at the following locations:
 - a. Two area samples outside the work area in uncontaminated areas of the building, remote from the decontamination facilities.
 - (1) Primary location selection shall be within 10 feet of isolation barriers.
 - (2) Where negative ventilation exhaust runs through uncontaminated building areas, one of the area samples will be required in these areas to monitor any potential fiber release.
 - (3) Where exhaust tubes have been grouped together in banks of up to five (5) tubes, with each tube exhausting separately and the bank of tubes terminating together at the same controlled area, one area air sample shall be taken.
 - b. One area sample within the uncontaminated entrance to each decontamination enclosure system.
 - c. Where adjacent non-work areas do not exist, an exterior area sample shall be taken.
 - d. One area sample within 5 feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors but not within a duct.
 - e. One area sample outside, but within 25 feet of, the building or structure, if the entire building or structure is the work area.
2. For large asbestos projects involving interior foam method, area air sampling shall be performed at the following sampling locations:
 - a. One area sample taken outside the work area within 10 feet of isolation barriers.
 - b. One area sample taken within the uncontaminated entrance to each worker decontamination and waste decontamination enclosure system.
 - c. One area sample within 5 feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors but not within a duct, if applicable.
 - d. Three area samples inside the work area.

- e. One area sample where the negative ventilation exhaust ducting runs through uncontaminated building areas, if applicable.
3. For large asbestos projects employing the glovebag procedure within a tent, a minimum of five continuous air samples shall be taken concurrently with the abatement for each work area, unless there are more than three enclosures, in which case two area samples per enclosure are required.
 - a. Four area samples taken outside the work area within ten feet of tent enclosure(s).
 - b. One area sample taken within the uncontaminated entrance to each worker and waste decontamination enclosure system.
 - c. One area sample within five feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors, but not within a duct, if applicable.
 - d. One area sample where negative ventilation exhaust ducting runs through uncontaminated building areas, if applicable.
 4. For large asbestos projects involving exterior foam method or removal of ACM from vertical surfaces, a minimum of five continuous area samples shall be taken concurrently with the abatement for each work area using the following minimum requirements:
 - a. Three area samples inside the work area and remote from the decontamination systems.
 - b. One area sample within the uncontaminated entrance to each worker and waste decontamination enclosure system.
 - c. One area sample outside the work area within 25 feet of the building or structure, if the entire building or structure is the work area.
 - d. One area sample inside the building or structure at the egress point to the work area, if applicable.
 5. For small asbestos projects employing full containment, a minimum of three continuous area samples shall be taken concurrently with the abatement for each work area at the following locations:
 - a. Two area samples taken outside the work area within ten feet of the isolation barriers.
 - b. One area sample within the uncontaminated entrance to each worker or waste decontamination enclosure system.

- c. One area sample within five feet of the unobstructed exhaust from a negative pressure ventilation system exhausting indoors, but not within a duct, if applicable.
 - d. One area sample where negative ventilation exhaust ducting runs through an uncontaminated building area, if applicable.
 - 6. Tent Procedures:
For projects involving more than 25 linear feet or 10 square feet, a minimum of three continuous samples shall be taken concurrently throughout abatement.
- J. Post-abatement clearance air monitoring for projects not solely employing glove-bag procedures shall include a minimum number of area samples inside each homogeneous work area and outside each homogeneous work area (five samples inside/five samples outside for Large Projects and three samples inside/three samples outside for Small Projects). In addition to the five sample inside/five sample outside minimum for Large Projects, one additional representative area sample shall be collected inside and outside the work area for every 5,000 square feet above 25,000 square feet of floor space where ACM has been abated.
- K. Post-abatement clearance air monitoring for Small Projects solely employing glove-bag procedures is not required unless one or more of the following events occurs. In such cases, post-abatement clearance air monitoring procedures shall be followed. The events requiring post-abatement clearance air monitoring are:
 - 1. The integrity of the glove-bag was compromised,
 - 2. Visible emissions are detected outside the glove-bag, and/or
 - 3. Ambient levels exceed 0.01 f/cc during abatement.
- L. Monitoring requirements for other than post-abatement clearance air monitoring are as follows:
 - 1. The sampling zone for indoor air samples shall be representative of the building occupants' breathing zone.
 - 2. If possible, outdoor ambient and baseline samplers should be placed about 6 feet above the ground surface in reasonable proximity to the building and away from obstructions and drafts that may unduly affect airflow.
 - 3. For outdoor samples, if access to electricity and concerns about security dictate a rooftop site, locations near vents and other structures on the roof that would unduly affect airflow shall be avoided.

4. Air sampling equipment shall not be placed in corners of rooms or near obstructions such as furniture.
 5. Samples shall have a chain of custody record.
- M. Area air sampling during abatement shall be conducted as specified in the following documents except as restricted or modified herein:
1. Measuring Airborne Asbestos Following an Abatement Action, US EPA document 600/4-85-049 (Nov., 1985);
 2. Guidance for Controlling Asbestos-Containing Materials in Buildings; US EPA Publication 560/5-85-024 (June, 1984);
 3. Methodology for the Measurement of Airborne Asbestos by Electron Microscopy US EPA Contract No. 68-02-3266;
 4. Mandatory and non-mandatory Electron Microscopy Methods set forth in 40 CFR Part 763, Subpart E, Appendix A.
 5. NIOSH 7400 method using "A" counting rules
- N. In accordance with the above criteria, area samples (see NYCDEP Asbestos Control Program Regulations) shall conform to the following schedule:

Area Samples for Analysis by	Minimum Volume	Flow Rate
PCM, 25mm cassettes	560 liters	5 to 15 liters/minute
TEM, 25mm cassettes	560 liters	1 to 10 liters/minute
TEM, 37mm cassettes	1,250 liters	1 to 10 liters/minute

- O. Post-abatement clearance air monitoring requirements are as follows:
1. Sampling shall not begin until at least one hour after wet cleaning has been completed and no visible pools of water or condensation remain.
 2. Samplers shall be placed at random around the work area. If the work area contains the number of rooms equivalent to the number of required samples based on floor area, a sampler shall be placed in each room. When the number of rooms is greater than the required number of samples, a representative sample of rooms shall be selected.
 3. The representative samplers placed outside the work area but within the building shall be located to avoid any air that might escape through the isolation barriers and shall be approximately 50 feet from the entrance to the work area, and 25 feet from the isolation barriers.

- P. The following aggressive sampling procedures shall be used within the work area during all clearance air monitoring:
1. Before starting the sampling pumps, use forced air equipment (such as a one horsepower leaf blower) to direct exhaust air against all walls, ceilings, floors, ledges and other surfaces in the work area. This pre-sampling procedure shall take at least five minutes per 1,000 square feet of floor area; then
 2. Place a 20-inch diameter fan in the center of the room. Use one fan per 10,000 cubic feet of room space. Place the fan on slow speed and point it toward the ceiling.
 3. Start the sampling pumps and sample for the required time or volume.
 4. Turn off the pump and then the fan(s) when sampling is completed.
 5. Collect a minimum number of area samples inside and outside each homogeneous work area (five inside/five outside samples for Large Projects and three inside/three outside samples for Small Projects). In addition to the minimum for Large Projects, one representative area samples shall be collected inside and outside the work area for every 5,000 square feet above 25,000 square feet of floor space where ACM has been abated.

Q. For post-abatement monitoring, area samples shall conform to the following schedule:

Area Samples for Analysis by	Minimum Volume	Flow Rate
PCM	1,800 liters	5 to 15 liters/minute
TEM	1,250 liters	1 to 10 liters/minute

1. Each homogeneous work area that does not meet the clearance criteria shall be thoroughly re-cleaned using wet methods, with the negative pressure ventilation system in operation. New samples shall be collected in the work area as described above. The process shall be repeated until the work site meets the clearance criteria.
2. For an asbestos project with more than one homogeneous work area, the release criterion shall be applied independently to each work area.
3. Should airborne fiber concentrations exceed the clearance criteria, the asbestos abatement contractor shall re-clean the work area utilizing wet wiping and HEPA-vacuuuming techniques. Following completion of re-cleaning activities, the Third-Party Air Monitor will perform an observation of the Work Area. If the Third-Party Air Monitor determines that the work was performed in accordance with the specifications, the appropriate settling period will be observed and additional air sampling will be performed.

4. All costs resulting from additional air tests and observations shall be borne by the asbestos abatement contractor. These costs may include, but are not limited to, labor, analysis fees, materials, and expenses.
5. After the area has been found to be in compliance, the asbestos abatement contractor may remove Isolation Barriers and perform final cleaning as specified.

R. Clearance and/or Re-occupancy Criteria:

1. The clearance criteria shall be applied to each homogeneous work area independently.
2. For PCM analysis, the clearance air monitoring shall be considered satisfactory when each of the 5 inside/5 outside samples for Large Projects and/or 3 inside/3 outside samples for Small Projects is less than or equal to 0.01 f/cc or the background concentrations, whichever is greater.
3. For TEM analysis, the clearance air monitoring shall be considered satisfactory when the requirements stated in 40 CFR Part 763, Subpart E, Appendix A, Section IV are met.
4. As soon as the air monitoring tests are completed, the Third-Party Air Monitor will send the results of such tests to the City and notify the Asbestos abatement contractor.
5. The asbestos abatement contractor shall initiate the appropriate closeout information into the DEP ARTS database within 24 hours of work area completion to allow the Third Party Air Monitoring Firm to complete and submit the ACP-15 forms for each specific work area.
6. The asbestos abatement contractor shall provide the ACP-20 and ACP-21 forms to the Third Party Air Monitoring Firm within 48 hours of receipt.

1.19 TAMPERING WITH TEST EQUIPMENT

All parties to this Contract are hereby notified that any tampering with testing equipment will be considered an attempt at falsifying reports and records to federal and state agencies and each offense will be prosecuted under applicable state and federal criminal codes to the fullest extent possible.

1.20 GUARANTEE

- A. Work performed in compliance with this Contract shall be guaranteed for a period of one year from the date the completed work is accepted by the City.

- B. The asbestos abatement contractor shall not be held liable for the guarantee where the repair required under the guarantee is a result of obvious abuse or vandalism, as determined by the Commissioner.
- C. The City will notify the asbestos abatement contractor in writing regarding defects in work under the guarantee.

PART 2 – PRODUCTS

2.01 MATERIAL HANDLING

- A. Deliver all materials to the job site in their manufacturer's original container, with the manufacturer's label intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. Store all materials on pallets, away from any damp and/or wet surface. Cover materials in order to prevent damage and/or contamination.
 - 3. Promptly remove damaged materials and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the City.
- B. The Construction Project Manager may reject as non-complying such material and products that do not bear identification satisfactory to the Construction Project Manager as to manufacturer, grade, quality and other pertinent information.

2.02 MATERIALS

- A. Wetting agents: (Surfactant) shall consist of resin materials in a water base, which have been tested to ensure materials are non-toxic and non-hazardous. Surfactants shall be installed according to the manufacturer's written instructions.
- B. Encapsulants: Liquid material which can be applied to asbestos-containing material which temporarily controls the possible release of asbestos fibers from the material or surface either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.
- C. During abatement activities, replacement materials shall be stored outside the work area in a manner to prevent contamination. Materials required for the asbestos project (i.e., plastic sheeting, replacement filters, duct tape, etc.) shall be stored to prevent damage or contamination.

- D. Framing Materials and Doors: As required to construct temporary decontamination facilities and isolation barriers. Lumber shall be high grade, new, finished one side and fire retardant.
- E. Fire Retardant Polyethylene Sheeting: minimum uniform thickness of 6-mil. Provide largest size possible to minimize seams. All materials used in the construction of temporary enclosures shall be noncombustible or fire-retardant in accordance with NFPA 701 and 255.
- F. Fire Retardant Reinforced Polyethylene Sheeting: For covering floor of decontamination units, provide translucent, nylon reinforced or woven polyethylene laminated, fire retardant polyethylene sheeting. Provide largest size possible to minimize seams, minimum uniform thickness 6-mil. All materials used in the construction of temporary enclosures shall be noncombustible or fire-retardant in accordance with NFPA 701 and 255.
- G. Drums: Asbestos-transporting drums, sealable and clearly marked with warning labels as required by OSHA and EPA.
- H. Polyethylene Disposal Bags: Asbestos disposal bags, minimum of fire retardant 6-mil thick. Bags shall be clearly marked with warning labels as required by OSHA and EPA.
- I. Signs: Asbestos warning signs for posting at perimeter of Work Area, as required by OSHA and EPA.
- J. Waste Container Bag Liners and Flexible Trailer Trays: One piece leak-resistant flexible tray with absorbent pad.
- K. Tape: Provide tape which is of high quality with an adhesive that is formulated to aggressively stick to sheet polyethylene.
- L. Spray Adhesive: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
- M. Flexible Duct: Spiral reinforced flex duct for air filtration devices.
- N. Protective Clothing: Workers shall be provided with sufficient sets of properly fitting, full-body, disposable coveralls, head covers, gloves, and 18-inch high boot-type foot covers. Protective clothing shall conform to OSHA Standard 29 CFR 1926.1101.
- O. Surfactants, strippers, sealers, or any other chemicals used shall be non-carcinogenic and non-toxic.
- P. Materials used in the construction of temporary enclosures shall be noncombustible or fire-retardant in accordance with NFPA 701 and 255.

2.03 TOOLS AND EQUIPMENT

- A. Air Filtration Device (AFD): AFDs shall be equipped with High Efficiency Particulate Air (HEPA) filtration systems and shall be approved by and listed with Underwriter's Laboratory.
- B. Scaffolding: All scaffolding shall be designed and constructed in accordance with OSHA (29 CFR 1926/1910), New York City Building Code, and any other applicable federal, state and local government regulations. Whenever there is a conflict or overlap of the above references the most stringent provisions are applicable. All scaffolding and components shall be capable of supporting without failure a minimum of four times the maximum intended load, plus an allowance for impact. All scaffolding and staging must be certified in writing by a Professional Engineer licensed to practice in the State of New York.
 - 1. Equip rungs of all metal ladders, etc., with an abrasive, non-slip surface.
 - 2. Provide non-skid surface on all scaffold surfaces subject to foot traffic. Scaffold ends and joints shall be sealed with tape to prevent penetration of asbestos fibers.
- C. Transportation Equipment: Transportation Equipment, as required, shall be suitable for loading, temporary storage, transit and unloading of asbestos contaminated waste without exposure to persons or property. Any temporary storage containers positioned outside the building for temporary storage shall be metal, closed and locked.
- D. Vacuum Equipment: All vacuum equipment utilized in the Work Area shall utilize HEPA filtration systems.
- E. Vacuum Attachments: Soft Brush Attachment, Asbestos Scraper Tool, Drill Dust Control Kit.
- F. Electric Sprayer: An electric airless sprayer suitable for application of encapsulating material and shall be approved by and listed with Underwriters Laboratory.
- G. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for amended water application.
- H. Water Atomizer: Powered air-misting device equipped with a ground fault interrupter and equipped to operate continuously.
- I. Brushes: All brushes shall have nylon bristles. Wire brushes are excluded from use due to their potential to shred asbestos fibers into small, fine fibers. Wire brushes maybe used for cleaning pipe joints within glove-bags upon written approval of the Construction Project Manager.

- J. Power tools used to drill, cut into, or otherwise disturb ACM shall be manufacturer-equipped with HEPA filtered local exhaust ventilation. Abrasive removal methods, including the use of beadblasters, are prohibited.
- K. Other Tools and Equipment: Asbestos abatement contractor shall provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to: hand-held scrapers, sponges, rounded-edge shovels, brooms, and carts.
- L. Fans and Leaf Blower: Provide Leaf Blower (one leaf blower per floor) and one 20-inch diameter fans for each 10,000 cubic feet of Work Area volume to be used for aggressive sampling technique for clearance air testing.
- M. Fire Extinguishers: At least one fire extinguisher with a minimum rating 2-A:10-B:C shall be required for each work place. In the case of large asbestos projects, at least two such fire extinguishers shall be required.
- N. First Aid Kits: Asbestos abatement contractor shall maintain adequately stocked first aid kits in the clean rooms of the decontamination units and within Work Areas. The first aid kit shall be approved by a licensed physician for the work to be performed under this Contract.
- O. Water Service:
 - 1. Temporary Water Service Connection: All connections to the Facilities water system shall include back flow protection. Valves shall be temperature and pressure rated for operation of the temperature and pressures encountered. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping, and equipment. Leaking or dripping fittings/valves shall be repaired and or replaced as required.
 - 2. Water Hoses: Employ new heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each Work Area and to each Decontamination Enclosure Unit. Provide fittings as required for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping, showers, shut-off nozzles and equipment.
 - 3. Water Heater: Provide UL rated 40-gallon electric water heaters to supply hot water for Personal Decontamination Enclosure System Shower. Activate from 30 Amp Circuit breakers located within the Decontamination Enclosure sub panel. Provide relief valve compatible with water heater operations, pipe relief valve down to drip pan at floor level with type 'L' copper piping. Drip pans shall be 6-inch deep and securely fastened to water heater. Wiring of the water heater shall comply with NEMA, NECA, and UL standards.
- P. Electrical Service:

1. General: Comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service.
2. Temporary Power: Provide service to decontamination unit sub panel with minimum 60 AMP, two pole circuit breaker or fused disconnect connected to the building's main distribution panel. Sub panel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work.
3. Voltage Differences: Provide identification warning signs at power outlets that are other than 110-120 volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 volt plugs into higher voltage outlets. Dry type transformers shall be provided where required to provide voltages necessary for work operations.
4. Ground Fault Protection: Equip all circuits for any purpose entering Work Area with ground fault circuit interrupters (GFCI). Locate the GFCIs outside the Work Area so that all circuits are protected prior to entry to Work Area. Provide circuit breaker type ground fault circuit interrupters (GFCI) equipped with test button and reset switch for all circuits to be used for any purpose in Work Area, decontamination units, exterior, or as otherwise required by NEC, OSHA or other authority.
5. Power Distribution System: Provide circuits of adequate size and proper characteristics for each use. In general run wiring overhead, and rise vertically where wiring will be least subject to damage from operations.
6. Temporary Wiring: In the Work Area shall be type UF non-metallic sheathed cable located overhead and exposed for surveillance. Provide liquid tight enclosures or boxes for all wiring devices. Do not wire temporary lighting with plain, exposed (insulated) electrical conductors.
7. Electrical Power Cords: Use only grounded extension cords; use hard service cords where exposed to traffic and abrasion. Use single lengths of cords only.
8. Temporary Lighting: All lighting within the Work Area shall be liquid and moisture proof and designed for the use intended.
 - a. Provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight, general lighting, and portable plug-in task lighting.
 - b. Provide lighting in the Decontamination Unit as required to supply a minimum 50-foot candle light level.

9. If electrical circuits, machinery, and other electrical systems in or passing through the work area must stay in operation due to health and safety requirements, the following precautions must be taken:
 - a. All unprotected cables, except low-voltage (less than 24 volts) communication and control system cables, panel boxes of cables and joints in live conduit that run through the work area shall be covered with three (3) independent layers of six (6) mil fire retardant polyethylene. Each layer shall be individually duct taped and sealed. All three (3) layers of polyethylene sheeting shall be left in place until satisfactory clearance air sampling results have been obtained.

2.04 CLEANING

- A. Throughout the construction period, the asbestos abatement contractor shall maintain the building as described in this Section.
 1. The asbestos abatement contractor shall prevent building areas other than the Work Area from becoming contaminated with asbestos-containing dust or debris. Should areas outside the Work Area become contaminated with asbestos-containing dust or debris as a consequence of the asbestos abatement contractor's work practices, the asbestos abatement contractor shall be responsible for cleaning these areas in accordance with the procedures appended in Title 15, Chapter 1 of RCNY and NYS DOL ICR56. All costs incurred in cleaning or otherwise decontaminating non-Work Areas and the contents thereof shall be borne by the asbestos abatement contractor at no additional cost to the City.
 2. The asbestos abatement contractor shall provide to all personnel and laborers the required equipment and materials needed to maintain the specified standard of cleanliness.
- B. General
 1. Waste water from asbestos removal operations, including shower water, may be discharged into the public sewer system only after approved filtration is in operation to remove asbestos fibers.
 2. Asbestos wastes shall be double bagged in six mil (.006") fire retardant polyethylene bags approved for ACM disposal and shall be properly labeled and handled before disposal.
 3. All waste generated shall be bagged, wrapped or containerized immediately upon removal. The personal and waste decontamination enclosure systems and floor and scaffold surfaces shall be HEPA vacuumed and wet cleaned at the end of each work shift at a minimum.

4. The asbestos abatement contractor shall use corrugated cartons or drums for disposal of asbestos-containing waste having sharp edged components (e.g., nails, screws, metal lathe and tin sheeting) that may tear polyethylene bags and sheeting. The waste within the drums or cartons must be double bagged.
5. The asbestos abatement contractor shall transport all bags of waste to disposal site in thirty gallon capacity metal or fiber drums with tight lids, or in locked steel dumpster.
6. Dumping of debris, waste or bagged waste will not be permitted.
7. The waste decontamination enclosure system shall be wet cleaned twice using wet cleaning methods upon completion of waste removal. When the worker decontamination enclosure shower room alternates as a waste container wash room, the shower room shall be washed immediately with cloths or mops saturated with a detergent solution prior to wet cleaning.
8. Excessive water accumulation or flooding in the work area shall require work to stop until the water is collected and disposed of properly.
9. ACM shall be collected utilizing rubber dust pans and rubber squeegees.
10. HEPA vacuums shall not be used on wet materials unless specifically designed for that purpose.
11. Metal shovels shall not be used within the work area.
12. Mastic solvent when used will be applied in moderation (e.g., by airless sprayer). Saturation of the concrete floor with mastic solvent must be avoided.
13. The asbestos abatement contractor shall retain all items in the storage area in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection of all materials.
14. The asbestos abatement contractor shall not allow accumulation of scrap, debris, waste material, and other items not required for use in this work. When asbestos contaminated waste must be kept on the work site overnight or longer, it shall be double bagged and stored in accordance with New York City Department of Sanitation (NYCDOS) regulation Title 16 Chapter 8, and Federal, State and City laws.
15. At least twice a week (more if necessary), the asbestos abatement contractor shall completely remove all scrap, debris and waste material from the job site.
16. The asbestos abatement contractor shall provide adequate storage space for all items awaiting removal from the job site, observing all requirements for fire protection and concerns for the environment.

17. All respiratory protection equipment shall be selected from the latest NIOSH Certified Equipment list.
18. Daily and more often, if necessary, the asbestos abatement contractor shall inspect the Work Areas and adjoining spaces, and pick up all scrap, debris, and waste material. All such items shall be removed to the place designated for their storage.
19. Weekly, and more often, if necessary, the asbestos abatement contractor shall inspect all arrangements of materials stored on the site; re-stack and tidy them or otherwise service them to meet the requirements of these Specifications.
20. The asbestos abatement contractor shall maintain the site in a neat and orderly condition at all times.

PART 3 – EXECUTION

3.01 WORKER DECONTAMINATION FACILITY

A. Large Asbestos Projects (Small Project Option):

1. Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the Work Areas
 - a. Structure:
 - (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16 inches on-center.
 - (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness fire rated plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
 - (3) Interior shall be covered with two layers of fire retardant 6-mil polyethylene sheeting, with a minimum overlap of 12 inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve inches.
 - (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to

allow for air movement through the decontamination units into Work Area.

- b. Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
- c. Air Locks: Air locks shall consist of two curtained doorways placed a minimum of three feet apart.
- d. Decontamination Enclosure System shall be placed adjacent to the Work Area and shall consist of three totally enclosed chambers, separated from Work Area and each other by airlocks, as follows:
 - (1) Equipment Room: The equipment room shall have a curtain doorway to separate it from the Work Area, and share a common airlock with the shower room. The equipment room shall be large enough to accommodate at least one worker (allowing them enough room to remove their protective clothing and footwear), and a fire retardant 6-mil disposal bag for collection of discarded clothing and equipment. The equipment room shall be utilized for the storage of equipment and tools after decontamination using a HEPA-vacuum and/or wet cleaning. A one-day supply of replacement filters, in sealed containers, for HEPA-vacuums and negative air machines, extra tools, containers of surfactant, and other materials and equipment required for the project shall be stored here. A walk-off pan filled with water shall be placed in the Work Area just outside the equipment room for persons to clean foot coverings when leaving the Work Area. Contaminated footwear and reusable work clothing shall be stored in this room.
 - (2) Shower Room: The shower room shall have two airlocks (one that separates it from the equipment room and one that separates it from the clean room). The shower room shall contain at least one shower, with hot and cold water adjustable at the tap, per six workers. Careful attention shall be given to the shower to ensure against leaking of any kind and shall contain a rigid catch basin at least six inches deep. Asbestos abatement contractor shall supply towels, shampoo and liquid soap in the shower room at all times. Shower water shall be continuously drained, collected, and filtered through a system with at least a 5-micron particle size collection capacity. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filters by large particles. Pumps shall be installed, maintained and utilized in accordance with manufacturer's recommendations. Filtered water shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.

- (3) Clean Room: The clean room shall share a common airlock with the shower room and shall have a curtained doorway to separate it from outside non-contaminated areas. Lockers, for storage of workers' street clothing, and shelves, for storing respirators, shall be provided in this area. Clean disposable clothing, replacement filters for respirators, and clean dry towels shall be provided in the clean room. The clean room shall not be used for the storage of tool, equipment or other materials.

B. Small Asbestos Projects:

1. Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the Work Areas.
2. The worker decontamination enclosure system shall consist of, as a minimum, an equipment room, a shower room, and a clean room separated from each other and from the work area by curtained doorways. The equipment storage, personnel gross decontamination and removal of disposal clothing shall occur in the equipment room prior to entering the shower. All other requirements shall be the same as described above for a large asbestos project.
3. For small asbestos projects with only one exit from the work area, the shower room may be used as a waste washroom. The clean room shall not be used for waste storage. All other requirements shall be the same as described above for a large asbestos project.

- C. Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Asbestos abatement contractor, and as specified herein.

3.02 WASTE DECONTAMINATION FACILITY

A. Large Asbestos Project (Small Project Option)

1. Provide a worker decontamination facility in accordance with, Title 15, Chapter 1, OSHA Standard 29 CFR 1926.1101, 12NYCRR Part 56 and as specified herein. Unless approved by NYCDEP and the City, worker decontamination facilities shall be attached to the Work Areas.

a. Structure:

- (1) Use modular systems or build using wood or metal frame studs, joists, and rafters placed at a maximum of 16 inches on-center.

- (2) When worker decontamination unit is located outdoors, in areas with public access, or in correctional facilities, frame work shall be lined with minimum 3/8" thickness fire rated plywood sheathing. Sheathing shall be caulked or taped airtight at all joints and seams.
 - (3) Interior walls shall be covered with two layers of fire retardant 6-mil polyethylene sheeting, with a minimum overlap of 12 inches at seams. Seal seams airtight using tape and adhesive. The interior floor shall be covered with two (2) layers of reinforced fire-retardant polyethylene sheeting with a minimum overlap on the walls of twelve inches.
 - (4) Entrances to the decontamination unit shall be secured with lockable hinged doors. Doors shall be open at all times when abatement operations are in progress. Doors shall be louvered to allow for air movement through the decontamination units into the Work Area.
- b. Curtained Doorways: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
 - c. Air Locks: Air locks shall consist of two curtained doorways placed a minimum of three feet apart.
 - d. Decontamination Enclosure System shall be located outside the work area and attached to all locations through which ACM waste will be removed from the work area and shall consist of two totally enclosed chambers, separated from the Work Area and each other by airlocks, as follows:
 - (1) Washroom: An equipment washroom shall have two air locks (one separating the unit from the Work Area and one common air lock that separates it from the holding area). The washroom shall have facilities for washing material containers and equipment. Gross removal of dust and debris from contaminated material containers and equipment shall be accomplished in the Work Area, prior to moving to the washroom.
 - (2) Holding Area: A holding area shall share a common air lock with the equipment washroom and shall have a curtained doorway to outside areas. A hinged, lockable door shall be placed at the holding area entrance to prevent unauthorized access into the Work Area.
- B. Small Asbestos Project:
1. The worker decontamination enclosure system shall consist of, as a minimum, an equipment room, a shower room, and a clean room separated from each other

and from the work area by curtained doorways. The equipment storage, personnel gross decontamination and removal of disposal clothing shall occur in the equipment room prior to entering the shower. All other requirements shall be the same as described above for a large asbestos project.

2. For small asbestos projects with only one exit from the work area, the shower room may be used as a waste washroom. The clean room shall not be used for waste storage. All other requirements shall be the same as described above for a large asbestos project.
- C. Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Asbestos abatement contractor, and as specified herein.

3.03 PERSONNEL ENTRANCE AND DECONTAMINATION PROCEDURES FOR REMOVAL OPERATIONS UTILIZING REMOTE DECONTAMINATION FACILITIES

- A. All individuals who enter the Work Area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall fully identify the facility, agents, asbestos abatement contractor(s), the project, each Work Area, and worker respiratory protection employed. The job supervisor shall be responsible for the maintenance of the log during the abatement activity. The log shall be submitted to the City of New York within 48 hours of request.
- B. Each worker shall remove street clothes in the clean room; wear two disposable suits, including gloves, hoods and non-skid footwear; and put on a clean respirator (with new filters) before entering the Work Area.
- C. Each worker shall, before leaving the Work Area or tent, clean the outside of the respirators and outer layer of protective clothing by wet cleaning and/or HEPA-vacuuming. The outer disposable suit shall be removed in the airlock prior to proceeding to the Worker Decontamination Unit. The inner disposable suit and respirator shall be wet wiped and HEPA vacuumed thoroughly before removing and prior to aggressive shower.
- D. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately.

3.04 PERSONNEL ENTRANCE AND DECONTAMINATION PROCEDURES FOR REMOVAL OPERATIONS UTILIZING ATTACHED DECONTAMINATION FACILITIES

- A. All workers and authorized visitors shall enter the Work Area through the worker decontamination facility.
- B. All individuals who enter the Work Area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall identify fully the facility, agents, asbestos abatement contractor(s), the project, each Work Area

and worker respiratory protection employed. The site supervisor shall be responsible for the maintenance of the log during the abatement activity. The log shall be submitted to the City of New York within 48 hours of request.

- C. Each worker or authorized visitor shall, upon entering the job site, remove street clothes in the clean room and put on a clean respirator with filters, and clean protective clothing before entering the Work Area through the shower room and equipment room.
- D. Each worker or authorized visitor shall, each time he leaves the Work Area, remove gross contamination from clothing before leaving the Work Area; proceed to the equipment room and remove clothing except the respirator; still wearing the respirator, proceed to the shower room; clean the outside of the respirator with soap and water while showering; remove filters, wet them, and dispose of them in the container provided for that purpose; wash and rinse the inside of the respirator; and thoroughly shampoo and wash himself/herself.
- E. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately. Disposable clothing of the type worn inside the Work Area is not permitted outside the Work Area.

3.05 MAINTENANCE OF DECONTAMINATION ENCLOSURE FACILITIES AND BARRIERS

The following procedures shall be followed during abatement activities.

- A. All polyethylene barriers inside the work place and partitions constructed to isolate the Work Area from occupied areas shall be inspected by the asbestos handler supervisor at least twice per shift.
- B. Smoke tubes shall be used to test the integrity of the Work Area barriers and the decontamination enclosure systems daily before abatement activity begins and at the end of each shift.
- C. Damage and defects in the decontamination enclosure system shall be repaired immediately upon discovery. The decontamination enclosure system shall be maintained in a clean and sanitary condition at all times.
- D. At any time during the abatement activity, if visible emissions are observed, or elevated asbestos fiber counts outside the Work Area are measured, or if damage occurs to barriers, abatement shall stop. The source of the contamination shall be located, the integrity of the barriers shall be restored and extended to include the contaminated area, and visible residue shall be cleaned up using appropriate HEPA-vacuuming and wet cleaning.
- E. Inspections and observations shall be documented in the daily project log by the asbestos handler supervisor.

- F. The daily inspection to ensure that exits have been checked against exterior blockage or impediments to exiting shall be documented in the log book. If exits are found to be blocked, abatement activities shall stop until the blockage is cleared.

3.06 MODIFICATIONS TO HVAC SYSTEMS

- A. Shut down, isolate or seal, all existing HVAC units, fans, exhaust fans, perimeter convection air units, supply and/or return air ducts, etc., situated in, traversing or servicing the work zone.
- B. Seal all seams with duct tape. Wrap entire duct with a minimum of two layers of fire retardant 6-mil polyethylene sheeting. All shutdowns are to be coordinated with the Facility. Where systems must be maintained, i.e., traversing Work Areas to non-Work Areas, only supply ducts will be maintained, protect as described above. All returns must be blanked off in Work Area and adjacent areas, including floor above and below Work Area. When required Asbestos abatement contractor shall apply for a clarification from NYCDEP. The Asbestos abatement contractor shall implement the following engineering procedures:
 - 1. Maintenance of a positive pressure within the HVAC system of 0.01 inch water gauge (or greater) with respect to the ambient pressure outside the Work Area. The conditions for this system shall be maintained and be operational 24 hours per day from the initiation of Work Area preparation until successful final air clearance. Positive pressurization of HVAC system shall be applied only under the direction and control of professional engineer, or other knowledgeable licensed professional;
 - 2. The positive pressurization of the duct shall be tested, inspected and recorded both at the beginning and at the end of each shift;
 - 3. The positive pressurization shall be monitored using instrumentation which will provide a written record of pressurization and that will trigger an audible alarm, if the static pressure falls below the set value;
 - 4. The supply air fan and the supply air damper for the active positive-pressurized duct shall be placed in the manual "on" positions to prevent shutdown by fail-safe mechanisms;
 - 5. The return air fan and the return air dampers shall be shut down and locked-out;
 - 6. All the seams of the HVAC ducts that pass through the Work Area shall be sealed;
 - 7. The HVAC ducts that pass through the Work Area shall be covered with two (2) layers of fire retardant 6-mil polyethylene sheeting, and all seams and edges of both layers shall be sealed airtight;

8. The supply air fans, return air fans, and all dampers servicing the Work Area itself shall be shut down and locked-out. All openings within the Work Area of supply and return air ducts shall be sealed with 3/8-inch fire rated plywood and two layers of fire retardant 6-mil polyethylene;
 9. When abatement occurs during periods while the HVAC system is shut down an alternative method of pressurization of the duct passing through the Work Area should be employed (e.g., by low-pressure "blowers", etc., directly coupled into the duct). Item #4 above shall be deleted and shall be replaced by the requirement to set the dampers of the HVAC duct in the manual closed positions, in order to effect pressurization.
- C. Asbestos abatement contractor to coordinate this item with the Facility and Construction Project Manager at the commencement of work. Where present HVAC systems (ducts) service an area and that air system cannot be shut down, asbestos abatement contractor shall isolate and seal the ducts, both supply and return, at the boundary of that zone.
1. To isolate, cap, or seal a duct, the asbestos abatement contractor shall remove insulation from duct (if necessary), then disconnect linkage to fold shut all fire dampers. Asbestos abatement contractor shall seal all edges and seams with caulk and duct-tape.
 2. Asbestos abatement contractor shall then cut existing duct and fold metal in and secure with approved fasteners. Asbestos abatement contractor shall caulk and duct-tape all seams and edges.
 3. All ducts shall then be completely wrapped and sealed with duct-tape and three (3) layers of reinforced polyethylene sheeting.
 4. All ducts shall be restored to original working order at the end of the project.
- D. Where present HVAC systems (ducts) service occupied areas (non-Work Areas), the Asbestos abatement contractor shall blank off the ducts.
1. To isolate or seal the return duct, the asbestos abatement contractor shall remove any insulation (if necessary) from the duct. Then disconnect linkage to fold shut all fire dampers and insert a fiberglass board within the duct. Asbestos abatement contractor shall seal all edges and seams with caulk, duct-tape and three (3) layers of reinforced polyethylene sheeting.
 2. All isolation of return ducts and any other activity that requires removal of ceiling by the asbestos abatement contractor shall be conducted under controls. Work is to be coordinated with the Construction Project Manager and the Facility and is described as follows:
 - a. Work shall occur as scheduled.

- b. Horizontal surfaces near the blanking operations shall be protected with fire retardant 6-mil polyethylene sheeting.
 - c. Plastic drapes shall be used to enclose the immediate area.
 - d. Asbestos abatement contractor to position and operate air filtration devices and HEPA-vacuums in the area to clean space after blanking operations.
 - e. All personnel involved with this work shall receive personal protection (i.e., respirators and disposable suits).
- E. Upon loss of negative pressure or electric power, all work activities in an area shall cease immediately and shall not resume until negative pressure and/or electric power has been fully restored. When a power failure or loss of negative pressure lasts, or is expected to last, longer than thirty (30) minutes, the following sequence of events shall occur.
- 1. All make up air inlets shall be sealed airtight.
 - 2. All decontamination facilities shall be sealed airtight after evacuation of all personnel from the Work Area.
 - 3. All adjacent areas shall be monitored for potential fiber release upon discovery of and subsequently throughout, power failure.

3.07 LOCKOUT OF HVAC SYSTEMS, ELECTRIC POWER, AND ACTIVE BOILERS

Prior to the start of any prep work, the asbestos abatement contractor shall employ skilled tradesmen with limited asbestos licenses for the following work:

- A. Disable all ventilating systems or other systems bringing air into or exhausting air out of the Work Area. Disable system by disconnecting wires removing circuit breakers, by lockable switch or other positive means to ensure against accidental re-starting of equipment.
- B. Lock out power to the Work Area by switching off all breakers and removing them from panels or by switching and locking entire panel. Label panel with following notation: "DANGER CIRCUIT BEING WORKED ON". Give all keys to Facility.
- C. Lock out power to circuits running through Work Area whenever possible by switching off and removing breakers from panel. If circuits must remain live, the Facility shall notify asbestos abatement contractor in order that he may secure a variance from NYCDEP. The asbestos abatement contractor shall protect all conduit and wires to remain and label all active circuits at intervals not to exceed 3 feet with tags having the following notation: "DANGER LIVE ELECTROCUTION HAZARD". The asbestos abatement contractor shall label all circuits in all locations including hidden locations that may be affected by the work in a similar manner.

- D. All boilers and other equipment within the work area shall be shut down, locked out, tagged out and the burner/boiler/equipment accesses and openings shall be sealed until abatement activities are complete. If the boiler or other exhausted equipment will be subject to abatement, all breaching, stacks, columns, flues, shafts, and double-walled enclosures serving as exhausts or vents shall be segregated from the affected boiler or equipment and sealed airtight to eliminate potential chimney effects within the work area.

PART 4 – PREPARATION OF WORK AREA AND REMOVAL PROCEDURES

4.01 REMOVAL OF ASBESTOS-CONTAINING MATERIAL

A. Asbestos abatement contractor Responsibility

Asbestos abatement contractor shall be responsible for the proper removal of ACM from the Work Area using standard industry techniques. The Third-Party Air Monitor representative shall observe the Work.

1. General Requirements:

- a. Removal of ACM shall be performed using wet methods. Dry removal of ACM is prohibited.
- b. Spray ACM with amended water with sufficient frequency and quantity to enhance penetration. Sufficient time shall be allowed for amended water to penetrate the material to the substrate prior to removal. All ACM shall be thoroughly wetted while work is being conducted.
- c. Accumulation of standing water on the floor of the Work Area is prohibited.
- d. Apply removal encapsulants, when used, in accordance with the manufacturer's recommendations and guidelines.
- e. Containerize ACM immediately upon detachment from the substrate. Alternately, ACM may be dropped in to a flexible catch basin and promptly bagged. Detached ACM is not permitted to lie on the floor for any period of time. Excess air within the bag shall be removed before sealing. ACM shall not be dropped from a height of greater than 10 feet. Above 10 feet, dust free inclined chutes may be used. Maximum inclination from horizontal shall be 60-degrees for all chutes.
- f. Exits from the work area shall be maintained, or alternative exits shall be established, in accordance with section 1027 of the New York City Fire Code. Exits shall be checked at the beginning and end of each work shift against blockage or impediments to exiting.

- g. Signs clearly indicating the direction of exits shall be maintained and prominently displayed within the work area.
 - h. No smoking signs shall be maintained and prominently displayed within the work place.
 - i. At least one fire extinguisher with a minimum rating 2-A:10-B:C shall be required for each work place. In the case of large asbestos projects, at least two such fire extinguishers shall be required.
 - j. If the containment area of an asbestos project covers the entire floor of the affected building, or an area greater than 15,000 square feet on any given floor, the installation of a negative air cut off switch or switches shall be required at a single location outside the work place, such as inside a stairwell, or at a secured location in the ground floor lobby when conditions warrant. The required switch or switches shall be installed by a licensed electrician pursuant to a permit issued by the Department of Buildings. If negative pressure ventilation equipment is used on multiple floors the cut off switch shall be able to turn off the equipment on all floors.
- B. Removal of ACM Utilizing Full Containment Procedures shall be as follows:
- 1. Preparation Procedures:
 - a. Ensure that the Third-Party Air Monitor has performed area monitoring and established a background count prior to the preparatory operations for each removal area, as applicable.
 - b. Shut down, isolate, and lock out or tag heating, ventilating, and air conditioning (HVAC) systems which serve or which pass through the Work Area. Vents within the Work Area and seams in HVAC components shall be sealed with tape and two layers of fire retardant polyethylene sheeting. Filters in HVAC systems shall be removed and treated as asbestos-asbestos contaminated waste.
 - c. Shut down, disconnect, and lock out or tag all electric power to the Work Area so that there is no possibility of its reactivation until after clearance testing of the Work Area.
 - d. Provide and install decontamination enclosure systems in accordance with Sections 3.01 and 3.02 of this Section.
 - e. Remove ACM that may be disturbed by the erection of partitions using tent procedures and wet removal methods. Removal shall be limited to a one-foot wide strip running the length/height of the partition.

- f. Pre-clean and remove moveable objects from the Work Area. Pre-cleaning shall be accomplished using HEPA-vacuum and wet-cleaning techniques. Store moveable objects at a location determined by the City.
- g. Protect carpeting that will remain in the Work Area.
 - (1) Pre-clean carpeting utilizing wet-cleaning techniques.
 - (2) Install a minimum of two layers of fire retardant 6-mil reinforced polyethylene sheeting over carpeting.
 - (3) Place a rigid flooring material, minimum thickness of 3/8-inch, over polyethylene sheeting.
- h. Pre-clean all fixed objects to remain within the Work Area using HEPA-vacuum and wet-cleaning techniques.
- i. Seal fixed objects with two individual layers, minimum, of 6-mil fire retardant polyethylene sheeting.
- j. Pre-clean entire Work Area utilizing HEPA-vacuum and wet-cleaning techniques. Methods of cleaning that raise dust; such as dry sweeping or use of vacuum equipment not equipped with HEPA-filters, is prohibited.
- k. Install isolation barriers (i.e., sealing of all openings, including but not limited to windows, corridors, doorways, skylights, ducts, grills, diffusers, and other penetrations within the Work Area) using two layers of 6-mil fire retardant polyethylene sheeting and duct-tape.
- l. Construct rigid framework to support Work Area barriers.
 - (1) Framework shall be constructed using 2-inch by 4-inch wooden or metal studs placed 16 inch on center when existing walls and/or ceiling do not exist for all openings greater than 32 square feet. Framework is not required except where one dimension is one foot or less or the opening will be used as an emergency exit.
 - (2) Apply a solid construction material, minimum thickness of 3/8-inch to the Work Area side of the framing. In secure interior areas, not subject to access from the public or building occupants, an additional layer of 6-mil fire retardant polyethylene sheeting may be substituted for the rigid construction material.
 - (3) Caulk all wall, floor, ceiling, and fixture joints to form a leak tight seal.

- m. Seal floor drains, sumps, shower tubs, and other collection devices with two layers of 6-mil fire retardant plastic and fire rated plywood, as necessary, and provide a system to collect all water used by the asbestos abatement contractor. Collected water shall be passed through a water filtration system prior to being discharged into the sanitary sewer.
- n. Remove ceiling mounted objects not previously sealed that will interfere with removal operations. Mist object and surrounding ACM with amended water prior to removal to minimize fiber dispersal. Clean all moveable objects using HEPA-vacuum and wet-cleaning techniques prior to removal from the Work Area.
- o. Fiberglass insulation with intact coverings shall be protected in place during abatement activities. These materials shall be protected with two layers of 6-mil fire retardant polyethylene sheeting as isolation barriers and two additional layers of 6-mil fire retardant polyethylene sheeting serving as primary and secondary surface barriers.
- p. Install and initiate operation of AFDs to provide a negative pressure and a minimum of four air changes per hour within the Work Area relative to surrounding non-Work Areas. Do not shut down AFDs until the Work Area is released to the City following final clearance procedures. The use of HEPA-filtered vacuum to produce a negative air pressure inside the enclosure is prohibited.
- q. Maintain emergency and fire exits from the Work Areas or establish alternative exits satisfactory to the local fire officials. Emergency exits and routes shall be established and clearly marked with florescent paint or other effective designations to permit easy location from anywhere within the Work Area. Cutting tools (e.g., knife, razor) shall be attached to the work area side of the sheeting for use in the event that the barrier must be cut open to allow egress. Emergency exits shall be secured to prevent access from uncontaminated areas and yet permit emergency exiting. Exits shall be checked daily against exterior blockage or impediments to exiting.
- r. Temporary lighting within the Work Area and decontamination system shall be provided as required to achieve minimum illumination levels.
- s. Hand power tools used to drill, cut into, or otherwise disturb ACM shall be manufacturer-equipped with HEPA filtered local exhaust ventilation.
- t. Prior to being plasticized, the Work Areas shall be cleaned using HEPA vacuum equipment and/or wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall not be used.
- u. Plasticize the area after pre-cleaning, using the following procedures.

- (1) Cover floors with one layer of 6-mil fire retardant polyethylene sheeting, turning layer a minimum of 6 inches up wall, and seal layer to wall.
 - (2) Cover walls with one layer of 6-mil fire retardant polyethylene sheeting, overlapping wall layer a minimum of 6 inches, and seal layer to floor layer.
 - (3) Cover floors with a second layer of 6-mil fire retardant polyethylene sheeting, turning layer a minimum of 12 inches up wall, and seal layer to wall.
 - (4) Cover walls with a second layer of fire retardant 6-mil polyethylene sheeting, overlapping wall layer a minimum of 12 inches, and seal layer to floor layer.
 - (5) In areas where demolition is required to access ACM, a layer of fire retardant 6-mil reinforced polyethylene sheeting shall be placed on the floor of the enclosure.
 - (6) Perform demolition required to access ACM. Debris resulting from demolition activities shall be disposed of as ACM waste as described in this Specification.
 - (7) Repeat preparation of areas accessed by demolition activities as described above.
- v. Suspended ceiling tiles and T-grid components shall remain in place until the preparation of the Work Area below the ceiling tiles are completed and personnel and equipment decontamination enclosures have been constructed.
- w. Scaffolds shall be provided for workers engaged in work that cannot safely be performed from the ground or other solid Work Area surface.
- x. Means of egress shall not be obstructed by hardwall barriers.
- y. Pre-Removal Inspections.
- (1) Prior to removal of any ACM, the asbestos abatement contractor shall notify the Third-Party Air Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.

- (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.
 - (3) Following the Third-Party Air Monitor's approval of the Work Area preparations, removal of ACM may commence.
2. Removal of ACM Within Full Containment:
 - a. Mist material with amended water. Allow sufficient time for the amended water to penetrate the material to be removed.
 - b. Remove the material using hand tools such as scrapers or putty knives. Wire-mesh or wood lathe reinforcing, when present, shall be cut into manageable pieces and disposed of as ACM.
 - c. Remove any residual material from the substrate using wet cleaning methods and nylon-bristled hand brushes.
 - d. Place the removal material immediately into a properly labeled fire retardant 6-mil polyethylene bag. All material shall be properly containerized and decontaminated prior to removal from the Work Area.
 - e. Following the completion of removal of insulation, all visible residue shall be removed from the substrate.
3. Following Removal of ACM utilizing Full Containment Procedures:
 - a. First Cleaning:
 - (1) Remove any visible accumulation of asbestos material and debris. HEPA-vacuuming and wet cleaning shall be performed on all surfaces inside the Work Area. All sealed drums, plastic bags, and equipment used in the Work Area shall be removed from the Work Area.
 - (2) Upon request of the asbestos abatement contractor, the Third-Party Air Monitor will perform a visual inspection. Evidence of asbestos contamination identified during the inspection will necessitate further cleaning as heretofore specified.
 - (3) Remove first layer of plastic sheathing inside the Work Area. The isolation barriers and decontamination facility shall remain in place and be utilized.
 - b. Second Cleaning:

- (1) After the first cleaning, the Work Area shall be vacated for twelve hours to allow fibers to settle.
- (2) All objects and surfaces in the Work Area shall be HEPA - vacuumed and wet cleaned for a second cleaning.
- (3) A thin coat of lockdown encapsulant shall be applied to all plastic covered surfaces in the Work Area.
- (4) When the encapsulant is dry, second layer of polyethylene sheeting on the walls, ceiling and floors shall be removed. Do not remove seals from doors, windows, Isolation Barriers or disconnect the negative pressure equipment.

c. Third Cleaning:

- (1) A minimum of four hours after the second cleaning, all the surfaces in the Work Area shall be HEPA-vacuumed and wet cleaned for a third cleaning.
- (2) Upon the request of the asbestos abatement contractor, the Third-Party Air Monitor will do final visual inspection for re-occupancy. Evidence of asbestos contamination identified during the inspection will necessitate further cleaning as heretofore specified.
- (3) When the Work Area passes the Third-Party Air Monitor's visual re-occupancy inspection, air sampling shall not begin until at least one hour after the completion of the third cleaning. The Third-Party Air Monitor shall perform air monitoring using aggressive testing techniques. The Third-Party Air Monitor will approve re-occupancy if the specified fiber count in the Work Area is achieved according to the Third-Party Air Monitor.
- (4) When the Work Area passes the re-occupancy test, all controls and seals established shall be removed.
- (5) The cleaned layer of the surface barriers shall be removed from walls and floors.
- (6) The isolation barriers shall remain in place throughout cleanup. Decontamination enclosure systems shall remain in place and be utilized. A thin coat of lockdown encapsulant shall be applied to all surfaces in the work area which were not the subject of removal or abatement, including the cleaned layer of the surface barriers, but excepting sprinklers, standpipes, and other active elements of the fire suppression system.

- d. Final Barrier Removal:
 - (1) Upon receipt of acceptable clearance testing results, polyethylene sheeting and Isolation Barriers shall be removed and disposed accordingly as asbestos-containing material.
 - (2) The area surrounding the abatement work place shall be cleaned of any visible debris utilizing HEPA vacuum and wet methods.
 - e. The Third-Party Air Monitor will conduct a final visual observation. Approval must be granted prior to break down of decontamination facility and asbestos abatement contractor demobilization.
- C. Removal of ACM utilizing NYCDEP Title 15, Chapter 1 §1-106 Tent Containment Procedures and/or Tent and Glove-bag Procedures utilizing NYCDEP Title 15, Chapter 1 §1-105 shall be as follows:
1. Preparation Procedures:
 - a. Ensure that the Third-Party Air Monitor has performed area monitoring and established a background count prior to the preparatory operations for each removal area, as applicable.
 - b. Shut down, isolate, and lock out or tag heating, ventilating, and air conditioning (HVAC) systems which serve or which pass through the Work Area. Vents within the Work Area and seams in HVAC components shall be sealed with tape and two layers of polyethylene sheeting. Filters in HVAC systems shall be removed and treated as asbestos-asbestos contaminated waste.
 - c. Shut down, disconnect, and lock out or tag all electric power to the Work Area so that there is no possibility of its reactivation until after clearance testing of the Work Area.
 - d. Provide and install decontamination enclosure systems in accordance with PART 3 - EXECUTION, Sections 3.01 and 3.02 of these Specifications. Decontamination facilities may be remote from the Work Areas.
 - e. Construct rigid framework to support Work Area barriers. Framework shall be constructed using 2-inch by 4-inch wooden or metal studs placed 16 inch on center when existing walls and/or ceiling do not exist.

- f. Seal floor drains, sumps, shower tubs, and other collection devices with two layers of fire retardant 6-mil plastic and minimum 3/8" fire rated plywood, as necessary, and provide a system to collect all water used by the asbestos abatement contractor. Collected water shall be passed through a water filtration system prior to being discharged into the sanitary sewer. Any opening greater than 32 square feet shall be framed with 2-inch by 4-inch studding placed 16 inches on center.
- g. Install and initiate operation of AFDs to provide a negative pressure and a minimum of four air changes per hour and negative pressure of -0.02" of water column within the Work Area relative to surrounding non-Work Areas. Do not shut down AFDs until the Work Area is released to the City following final clearance procedures. The use of HEPA-filtered vacuums to produce a negative air pressure inside the enclosure is prohibited.
- h. Maintain emergency and fire exits from the Work Areas or establish alternative exits satisfactory to the local fire officials. Emergency exits and routes shall be established and clearly marked with florescent paint or other effective designations to permit easy location from anywhere within the Work Area. Emergency exits shall be secured to prevent access from uncontaminated areas and yet permit emergency exiting. Exits shall be checked daily against exterior blockage or impediments to exiting.
- i. Temporary lighting within the Work Area and decontamination system shall be provided as required to achieve minimum illumination levels.
- j. Hand power tools used to drill, cut into, or otherwise disturb ACM shall be manufacture equipped with HEPA filtered local exhaust ventilation.
- k. Prior to being plasticized, the Work Areas shall be cleaned using HEPA-vacuum equipment and/or wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall not be used.
- l. There shall be an airlock at the entrance to the tent, unless there is an attached worker or waste decontamination system.
- m. Plasticize the area after pre-cleaning, using the following procedures. Do not apply polyethylene sheeting to the wall and ceiling surfaces that will be demolished to access ACM.
 - (1) Cover floor with one layer of fire retardant 6-mil polyethylene sheeting, turning layer a minimum of 12 inches up wall, and seal layer to wall.

- (2) Cover walls with one layer of fire retardant 6-mil polyethylene sheeting, overlapping wall layer a minimum of 12 inches, and seal layer to floor layer.
 - (3) Cover ceilings with one layer of fire retardant 6-mil polyethylene sheeting, overlapping wall layer a minimum of 12 inches, and seal layer to wall layer.
 - (4) Repeat procedure for second layer. All joints in polyethylene sheeting shall be glued and taped in such a manner as to prohibit air passage. Joints on plastic layers shall be staggered to reduce the potential for water to penetrate.
 - (5) In areas where demolition is required to access ACM, a layer of fire retardant 6-mil reinforced polyethylene sheeting shall be placed on the floor of the enclosure.
 - (6) Perform demolition required to access ACM. Debris resulting from demolition activities shall be disposed of as ACM as described in this Specification.
 - (7) Repeat preparation of areas accessed by demolition activities as described above.
 - (8) Suspended ceiling tiles and T-grid components shall remain in place until the preparation of the Work Area below the ceiling tiles are completed and personnel and equipment decontamination enclosures have been constructed.
 - (9) Protect non-ACM insulation within the Work Area(s) with two individual layers of fire retardant 6-mil polyethylene sheeting. Sheeting shall remain in-place until satisfactory clearance air monitoring results are achieved.
- n. Installation of glove-bags for removal of thermal system insulation, when required:
- (1) General: Glove-bag operations shall be performed using commercially available glove-bags of at least fire retardant 6-mil, transparent plastic appropriately sized for the diameter of the material to be removed. The use of "moveable" glove-bag techniques is strictly forbidden. At no time, shall the glove-bag be sized to allow for the removal of more than three linear feet of insulation. Glovebag procedures may only be used in conjunction with full containment of the work area or the tent procedure.

- (2) Place the necessary tools and materials inside of the tool pouch of the glove-bag before the glove-bag procedure begins.
 - (3) Place duct-tape securely around the affected area to form a smooth area to which the glove-bag can be securely fastened.
 - (4) Attach glove-bag to the cable, wire or pipe. Seal top of glove-bag by double folding and stapling. Place duct-tape along the seam to form an airtight seal. Seal sides of glove-bag, where cable, wire or pipe passes through, with duct-tape to form an airtight seal.
 - (5) If the material adjacent to the work section is damaged, terminates, is jointed or contains an irregularity, wrap the section in two layers of 6-mil fire retardant polyethylene sheeting and seal airtight with duct-tape.
 - (6) Smoke test each glove-bag as indicated below. The Third-Party Air Monitor shall be present during all smoke testing.
 - (7) The glovebag shall be placed under negative pressure utilizing a HEPA vacuum, and a smoke tube shall then be aspirated to direct smoke at all seams and seals from outside the glovebag. Any leaks detected by the smoke test shall be duct taped airtight.
 - (8) All necessary tools and materials shall be brought into the work area before the glovebag procedure begins.
 - (9) Glovebag procedures shall be conducted by workers specifically trained in glovebag procedures and equipped with appropriate personal protective equipment.
 - (10) The insulation diameter worked shall not exceed one half the bag working length above the attached gloves.
- o. Glovebag procedures shall be conducted by workers specifically trained in glovebag procedures and equipped with appropriate personal protective equipment.
- p. Pre-Removal Inspections
- (1) Prior to removal of any ACM, the Asbestos abatement contractor shall notify the Third-Party Air Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.

- (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.
- (3) Following the Third-Party Air Monitor's approval of the Work Area preparations, removal of ACM may commence.

2. Removal of ACM Thermal Insulation Using Glove-Bag Techniques:

- a. Mist material with amended water. Allow sufficient time for the amended water to penetrate the material to be removed.
- b. Remove the insulation using hand tools such as knives or scissors.
- c. Exercise caution when removing insulation.
- d. Remove any residual asbestos-containing insulation from the substrate using wet cleaning methods and nylon-bristled hand brushes.

- (1) Any insulation ends created by this procedure shall be sealed with encapsulant prior to bag removal or thoroughly wetted before bag removal and sealed with wettable cloth end caps and spray glue or any combination of these materials immediately following bag removal.
- (2) The tool pouch shall be separated from the bag prior to disposal by twisting it and the wall to which it is attached several times, and taping the twist to hold it in place, thus sealing the bag and the pouch which are severed at the midpoint of the twist. Alternatively, the tools can be pulled through with one or both glove inserts, thus turning the gloves inside out. The glove(s) is/are then twist sealed forming a new pouch, taped and several mid-seal forming two separate bags.
- (3) A HEPA vacuum shall be used for evacuation of the glovebag in preparation for removal of the bag from the surface for clean-up in the event of a spill, and for post project clean-up.
- (4) With the glovebag collapsed and the ACM in the bottom of the bag, the bag shall be twisted several times and taped to seal that section during bag removal.
- (5) A 6-mil plastic bag shall be slipped around the glovebag while it is still attached to the surface. The bag shall be detached from the surface by removing the tape or cutting the top with blunt scissors.
- (6) The asbestos-containing waste, the clean-up materials, and protective clothing shall be wetted sufficiently, double-bagged

minimizing air content, sealed separately, and disposed of in conformance with applicable regulations.

3. Removal of ACM Utilizing Tent Containment Procedure:
 - a. Tent procedures shall be limited to the removal of less than 260 linear feet and 160 square feet of ACM and shall not result in disturbance of ACM during tent erection.
 - b. Mist material with amended water and/or foam. Allow sufficient time for the amended water to penetrate the material to be removed.
 - c. Cut bands, wire or other items placed over insulation or ACM.
 - d. Remove the ACM using hand tools such as knives or scrapers.
 - e. Exercise caution when removing ACM.
 - f. Remove any residual asbestos-containing material from the substrate using wet cleaning methods.
 - g. Seal exposed ends of remaining insulation or ACM with a "wetable cloth" and/or encapsulant.
 - h. Place the removed material immediately into a properly labeled fire retardant 6-mil polyethylene bag. All material shall be properly containerized and decontaminated prior to removal from the Work Area.
 - i. Following the completion of removal of ACM, all visible residue shall be removed from the substrate.

4. Following Removal of ACM Utilizing Tent Containment or Tent/Glovebag Procedure:
 - a. Clean all visible accumulations of loose ACM. Metal shovels shall not be used within the Work Area.
 - b. Accumulations of dust shall be cleaned continuously until completion of clean up.
 - c. After removal of all visible accumulations of ACM, the area shall be:
 - (1) Wet cleaned using rags, mops or sponges.
 - (2) Permitted sufficient time to dry, prior to HEPA vacuuming all substrates.

- (3) Lightly encapsulated to lockdown residual asbestos. A thin coat of an encapsulating agent shall be applied to any surfaces in the Work Area which were not the subject of removal or other remediation activities. In no event shall encapsulant be applied to any surface that was the subject of removal or other remediation activities prior to obtaining satisfactory clearance air monitoring results. Asbestos abatement contractor shall request and pass a visual inspection performed by the consultant before proceeding to the next step. Documentation of passing this inspection shall be recorded in a daily logbook.
 - (4) The Third-Party Air Monitor will conduct a visual observation of the Work Area to verify the absence of asbestos-containing waste materials.
 - (5) If the Work is accepted by the Third-Party Air Monitor based on the inspection, asbestos abatement contractor shall be notified. Conduct the following activities in accordance with the contract and all applicable laws, codes, rules and regulations.
 - (a) All waste shall be removed from the Work Area and holding areas.
 - (b) All tools and equipment are to be removed and decontaminated in the decontamination enclosure system.
 - (6) If the Work is not approved, the Third-Party Air Monitor will inform Asbestos abatement contractor who will then HEPA-vacuum and/or wet-clean the Work Area. The Third-Party Air Monitor will then perform a subsequent visual observation. This process will continue until the Third-Party Air Monitor accepts the Work Area as clean.
 - (7) The Work Area shall be vacated for a minimum of one hour to allow fibers to settle prior to clearance air monitoring, when required.
- d. Final Barrier Removal
- (1) Upon receipt of acceptable clearance testing results polyethylene sheeting (inside layers) and Isolation Barriers shall be removed and disposed accordingly as ACM. The tent shall be collapsed inward, enclosing the contaminated clothing. This contaminated material shall be disposed of in another plastic bag. The HEPA vacuum shall be decontaminated and sealed.
 - (2) The area surrounding the abatement work place shall be cleaned of any visible debris utilizing HEPA-vacuum and wet methods.

- e. The Third-Party Air Monitor will conduct a final visual inspection. Approval must be granted prior to break down of decontamination facility and asbestos abatement contractor demobilization. Other Information: Extra time required to clean Work Areas in order to achieve clearance criteria shall not be considered grounds for an extension of time for contract completion.
- D. Removal of Floor Tile and Mastic utilizing NYCDEP Title 15, Chapter 1 §1-108 Foam/Viscous Liquid Use in Flooring Removal procedures shall be as follows:
1. Preparation of the Work Area:
 - a. These procedures only apply to the removal of vinyl asbestos floor tiles (VAT), ACM floor coverings and associated mastics and adhesives, where only the ACM being abated in the work area is flooring material.
 - b. Request that the Third-Party Air Monitor perform area monitoring and establish a background count prior to the preparatory operations for each removal area.
 - c. Provide and install decontamination enclosure systems in accordance with PART 3 - EXECUTION, Sections 3.01 and 3.02 of these Specifications and NYCDEP Title 15, Chapter 1. Decontamination facilities may be remote from the Work Areas upon approval from NYCDEP.
 - d. Shut down, isolate, and lock out or tag heating, ventilating, and air conditioning (HVAC) systems which serve or which pass through the Work Area. Vents within the Work Area and seams in HVAC components shall be sealed with tape and two layers of polyethylene sheeting. Filters in HVAC systems shall be removed and treated as asbestos contaminated waste.
 - e. Shut down, disconnect, and lock out or tag all electric power to the Work Area so that there is no possibility of its reactivation until after clearance testing of the Work Area.
 - f. Seal floor drains, sumps and other collection devices with two layers of fire retardant 6-mil plastic and fire rated plywood, as necessary, and provide a system to collect all water used by the Asbestos abatement contractor. Collected water shall be passed through a water filtration system prior to being discharged into the sanitary sewer.
 - g. Separate by means of airtight barriers (isolation barriers) parts of the building that are not included in the Work Area(s) from parts of the building that will undergo asbestos abatement.
 - h. Seal with isolation barriers: open doorways, cased openings, and corridors that will not be used for passage during work.

- i. Isolation barriers shall extend from the floor to the ceiling and form an airtight seal. They shall be built using 2-inch by 4-inch wood or metal framing placed 16 inch on center and shall be braced as necessary. Cover the work sides of the studding with two layers of 6-mil fire retardant, reinforced polyethylene sheeting. Install barriers to form a leaktight seal between the Work Area and adjacent areas. Install isolation barriers in a manner to endure "negative air pressure" within the Work Area.
- j. Completely seal airtight and isolate the Work Area. All openings, including but not limited to doorways, tunnels, ducts, grilles, cracks, diffusers, openings through which pipe conduit passes, and any other penetrations of the Work Area, shall be covered with polyethylene sheeting taped or caulked airtight.
- k. Maintain emergency and fire exits from the Work Areas or establish alternative exits satisfactory to the local fire officials. Emergency exits and routes shall be established and clearly marked with fluorescent paint or other effective designations to permit easy location from anywhere within the Work Area. Emergency exits shall be secured to prevent access from uncontaminated areas and yet permit emergency exiting. Exits shall be checked daily against exterior blockage or impediments to exiting.
- l. Temporary lighting within the Work Area and decontamination system shall be provided as required to achieve minimum illumination levels.
- m. After isolating the area, install and initiate operation of air filtration devices (AFDs) to provide a negative pressure of at least -0.02 inches of water and four air changes per hour within the Work Area relative to surrounding non-Work Areas. In areas where negative air units cannot be exhausted to the exterior of the station, units shall be installed in series. When installing units in series, the exhaust from an AFD shall be exhausted into the intake of a second AFD of equal or greater capacity. The exhaust from the second unit shall be directed to the exterior of the Work Area in an area that is not accessible to the public. Both units shall be located inside the Work Area. Exhaust and connect AFD using spiral-reinforced tubing manufactured for this purpose. Do not shut down AFDs until the Work Area is released to the City following final clearance procedures.
- n. Hand power tools used to drill, cut into, or otherwise disturb ACM shall be manufacturer-equipped with HEPA filtered local exhaust ventilation.
- o. Scaffolds shall be provided for workers engaged in work that cannot safely be performed from the ground or other solid Work Area surface.

- p. Work Area Pre-cleaning Procedures: After establishing the decontamination enclosure systems, prepare and pre-clean the Work Area as specified below:
- (1) Movable and loose items not removed by the City shall be cleaned using HEPA vacuum equipment and/or wet cleaning methods as appropriate and shall be removed from the Work Area and stored at the City's direction.
 - (2) Movable and loose items contaminated with asbestos shall be removed from the Work Areas and properly discarded as asbestos contaminated waste.
 - (3) Fixed objects within the Work Area shall be pre-cleaned using HEPA-vacuum equipment and/or wet cleaning methods as appropriate. Joints of covers or casings shall be sealed with tape and fixed objects enclosed with a minimum of two layers of 6-mil fire retardant polyethylene sheeting sealed airtight with tape. Disassembly of these fixed objects is not required unless otherwise noted. Fixed objects shall include, but not be limited to, light fixtures, junction boxes, hangers and black carrying channels.
 - (4) Prior to being plasticized, the Work Areas shall be cleaned using HEPA-vacuum equipment and/or wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA-filters, shall not be used.
- q. Plasticize the area after pre-cleaning, using the following procedure:
- (1) Floor surfaces shall be sealed with a minimum of two layers of fire retardant 6-mil plastic sheeting, except where the only ACM being abated in the project is vinyl asbestos floor tile or other flooring material, in which case the floor need not be sealed;
 - (2) Baseboards and wall surfaces shall be sealed with a minimum of two layers of fire retardant 6-mil plastic sheeting up to a minimum height of four feet above the floor. If hand power tools are used during abatement, wall surfaces shall be covered with a layer of fire retardant 6-mil polyethylene sheeting to minimum height of six feet.
- r. Pre-Removal Inspections
- (1) Prior to removal of any ACM, the asbestos abatement contractor shall notify the Third-Party Air Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination

enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.

- (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.
- (3) Following the Third-Party Air Monitor's approval of the Work Area preparations, removal of ACM may commence.

2. Removal of ACM Floor Tile and Mastic:

- a. Prior to actual removal, the floor tiles and associated mastic shall be blanketed and wetted with a minimum 1-inch to 3-inch coating of the acceptable foam or viscous liquid that shall leave an identifiable colored residue when it dissipates and shall be maintained for the duration of the removal until the material is bagged.
- b. The foam or viscous liquid shall be non-toxic, shall not require special respiratory protection from handling, and shall not affect the handling and disposal of the waste.
- c. The foam or viscous liquid shall coat and wet the ACM. The ACM shall be kept wet through the bagging process.
- d. Persons entering the work area shall wear correctly-fitting, good-traction rubber boots.
- e. Remove floor tile and all underlying layers using a flat hoe or scraper. Remove adhesive backing using approved mastic removal solvent. Do not grind or sand floor.
- f. Completely remove floor tile and adhesive backing using appropriate tools and materials. As material is removed, wrap it in two layers of plastic and place it in labeled containers for transport.
- g. Completely remove bulk mastic using an approved mastic solvent. Product application shall be in accordance with the manufacturer's instructions and the Material Safety Data Sheet (MSDS) for the product. Do not allow solvent to stand or to be absorbed by sub-floor. Use diatomaceous earth to prevent the flow of solvent under walls or into other areas from which it would be difficult to recover. Absorb spent solvent and associated mastic immediately after use with diatomaceous earth and place in drums dedicated for the disposal of floor tile mastic waste.
- h. After completion of mastic removal, thoroughly wash the floor with detergent and rinse clean. Use sufficient quantities of diatomaceous earth to soak up water and detergent so that the waste is completely solid. Place

waste in sealed drums dedicated for the disposal of floor tile mastic waste. No bulk mastic residue and traces of foam/viscous liquid shall remain on the floor surface following removal and cleaning. It is not necessary to remove stain from pores of concrete.

- i. Spent mastic removal agents must be properly stored, categorized and disposed. Refer to "ACM Waste Packing and Load Out Procedures".
 - j. On completion of floor mastic removal, the floor shall be smooth, free from ridges and bumps, and suitable to receive replacement flooring.
3. Additional Removal Requirements: The Third-Party Air Monitor shall issue a stop work order if visible emissions are detected outside the Work Areas and/or should the airborne fiber concentrations meet or exceed 0.01 f/cc of air or the background count (use the greater of these two values as the reference). Work shall not resume until the condition(s) causing the increase are corrected, surfaces are decontaminated using HEPA vacuums or wet cleaning techniques and the Asbestos abatement contractor receives notice from the Third-Party Air Monitor.
4. Following Removal of ACM Floor Tile and Mastic:
- a. All surfaces shall be wet cleaned.
 - b. HEPA-vacuum all surfaces.
 - c. Conduct the following activities in accordance with the contract and all applicable laws, codes, rules and regulations.
 - (1) All waste shall be removed from the Work Area and holding areas.
 - (2) All tools and equipment are to be removed and decontaminated in the decontamination enclosure system.
 - d. The Third-Party Air Monitor will conduct a visual observation of the Work Area to verify the absence of asbestos-containing waste materials.
 - e. If the Work is not approved, the Third-Party Air Monitor will inform asbestos abatement contractor who will then wet-clean and HEPA-vacuum the Work Area. The Third-Party Air Monitor will then perform a subsequent visual observation. This process will continue until the Third-Party Air Monitor accepts the Work Area as clean.
 - f. Remove polyethylene barriers from the walls of the Work Area. Isolation barriers shall remain in place.
 - g. Perform a thorough HEPA-vacuuuming of the Work Area.

- h. The Third-Party Air Monitor will conduct a visual observation of the Work Area to verify the absence of asbestos-containing waste materials.
 - i. If the Work is not approved, the Third-Party Air Monitor will inform asbestos abatement contractor who will then HEPA-vacuum the Work Area. The Third-Party Air Monitor will then perform a subsequent visual observation. This process will continue until the Third-Party Air Monitor accepts the Work Area as clean.
 - j. If results of air sampling performed during abatement activities indicate airborne fiber concentrations of less than 0.01 fibers per cubic centimeter, or the background level, whichever is greater, final clearance air sampling is not required. The abatement action may be considered complete.
 - k. Isolation Barrier Removal
 - (1) Upon receipt of acceptable observation results, polyethylene sheeting and barrier tape shall be removed and disposed accordingly as ACM.
 - (2) The area surrounding the abatement work place shall be cleaned of any visible debris utilizing HEPA vacuum and wet methods.
 - l. The Third-Party Air Monitor will conduct final visual inspection. Approval must be granted prior to break down of decontamination facility and asbestos abatement contractor demobilization. Other Information: Extra time required to clean Work Areas in order to achieve clearance criteria shall not be considered grounds for an extension of time for contract completion.
- E. Removal of ACM Vinyl Asbestos Floor Tiles (VAT) and other Asbestos Containing Materials by Full containment Procedures without Plastic on the Floor utilizing NYC DEP Variance Attachment VA shall be as follows:
- 1. Preparation of the Work Area:
 - a. Request that the Third-Party Air Monitor perform area monitoring and establish a background count prior to the preparatory operations for each removal area.
 - b. Provide and install decontamination enclosure systems in accordance with PART 3 - EXECUTION, Sections 3.01 and 3.02 of these Specifications and the NYCDEP Variance.

- c. Shut down, isolate, and lock out or tag heating, ventilating, and air conditioning (HVAC) systems which serve or which pass through the Work Area. Vents within the Work Area and seams in HVAC components shall be sealed with tape and two layers of polyethylene sheeting. Filters in HVAC systems shall be removed and treated as asbestos contaminated waste.
- d. Shut down, disconnect, and lock out or tag all electric power to the Work Area so that there is no possibility of its reactivation until after clearance testing of the Work Area.
- e. Seal floor drains, sumps and other collection devices with two layers of 6-mil fire retardant plastic and fire rated plywood, as necessary, and provide a system to collect all water used by the asbestos abatement contractor. Collected water shall be passed through a water filtration system prior to being discharged into the sanitary sewer.
- f. The foam or viscous liquid shall be non-toxic, shall not require special respiratory protection for handling, and shall not affect the handling and disposal of the waste.
- g. The foam or viscous liquid shall coat and maintain a stable blanket (minimum 1" thickness) for the duration of the removal process and shall leave an identifiable colored residue when it dissipates. The acceptable foam or viscous liquid shall be maintained for the duration of the removal until the material is bagged.
- h. The foam or viscous liquid shall coat and wet the ACM. The ACM shall be kept wet through the bagging process.
- i. Baseboards and wall surfaces up to a minimum height of four feet above the floor shall be covered with a layer of fire retardant 6-mil plastic sheeting. If hand power tools are used during the abatement, wall surfaces shall be covered with a layer of fire retardant 6-mil polyethylene sheeting to a minimum height of six feet.
- j. Negative air pressure ventilation shall be provided to allow make-up air into the work area, and the air outlet from the work area shall be at or near the floor level.
- k. Separate by means of airtight barriers (isolation barriers) parts of the building that are not included in the Work Area(s) from parts of the building that will undergo asbestos abatement.
- l. Seal with isolation barriers: open doorways, cased openings, and corridors that will not be used for passage during work.

- m. Isolation barriers shall extend from the floor to the ceiling and form an airtight seal. They shall be built using 2-inch by 4-inch wood or metal framing placed 16 inch on center and shall be braced as necessary. Cover the work sides of the studding with two layers of 6-mil reinforced, fire retardant polyethylene sheeting. Do not cover wall surfaces or track boxes that will be affected by abatement activities. Install barriers to form a leaktight seal between the Work Area and adjacent areas. Install isolation barriers in a manner to endure "negative air pressure" within the Work Area.
- n. Completely seal airtight and isolate the Work Area. All openings, including but not limited to doorways, tunnels, ducts, grilles, cracks, diffusers, openings through which pipe conduit passes, and any other penetrations of the Work Area, shall be covered with polyethylene sheeting taped or caulked airtight.
- o. Maintain emergency and fire exits from the Work Areas or establish alternative exits satisfactory to the local fire officials. Emergency exits and routes shall be established and clearly marked with fluorescent paint or other effective designations to permit easy location from anywhere within the Work Area. Emergency exits shall be secured to prevent access from uncontaminated areas and yet permit emergency exiting. Exits shall be checked daily against exterior blockage or impediments to exiting.
- p. Temporary lighting within the Work Area and decontamination system shall be provided as required to achieve minimum illumination levels.
- q. After isolating the area install and initiate operation of air filtration devices (AFDs) to provide a negative pressure of at least -0.02 inches of water and six air changes per hour within the Work Area relative to surrounding non-Work Areas. In areas where negative air units cannot be exhausted to the exterior of the station, units shall be installed in series. When installing units in series, the exhaust from an AFD shall be exhausted into the intake of a second AFD of equal or greater capacity. The exhaust from the second unit shall be directed to the exterior of the Work Area in an area that is not accessible to the public. Both units shall be located inside the Work Area. Exhaust and connect AFD using spiral-reinforced tubing manufactured for this purpose. Do not shut down AFDs until the Work Area is released to the City following final clearance procedures.
- r. Hand power tools used to drill, cut into, or otherwise disturb ACM shall be manufacturer-equipped with HEPA filtered local exhaust ventilation.
- s. Scaffolds shall be provided for workers engaged in work that cannot safely be performed from the ground or other solid Work Area surface.

- t. Work Area Pre-cleaning Procedures: After establishing the decontamination enclosure systems, prepare and pre-clean the Work Area as specified below:
- (1) Movable and loose items not removed by the City shall be cleaned using HEPA vacuum equipment and/or wet cleaning methods as appropriate and shall be removed from the Work Area and stored at the City's direction.
 - (2) Movable and loose items contaminated with asbestos shall be removed from the Work Areas and properly discarded as asbestos-asbestos contaminated waste.
 - (3) Fixed objects within the Work Area shall be pre-cleaned using HEPA-vacuum equipment and/or wet cleaning methods as appropriate. Joints of covers or casings shall be sealed with tape and fixed objects enclosed with a minimum of two layers of 6-mil fire retardant polyethylene sheeting sealed airtight with tape. Fixed objects shall include, but not be limited to, light fixtures, junction boxes, hangers and black carrying channels.
 - (4) Prior to being plasticized, the Work Areas shall be cleaned using HEPA-vacuum equipment and/or wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA-filters, shall not be used.
- u. Plasticize the area after pre-cleaning, using the following procedure:
- (1) Cover walls with one layer of 6-mil fire retardant polyethylene sheeting, and seal to floor.
 - (2) Cover walls with a second layer of 6-mil fire retardant polyethylene sheeting, overlapping first wall layer a minimum of 12 inches, and seal to floor.
- v. Pre-Removal Inspections
- (1) Prior to removal of any ACM, the asbestos abatement contractor shall notify the Third-Party Air Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.
 - (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.

- (3) Following the Third-Party Air Monitor's approval of the Work Area preparations, removal of ACM may commence.
2. Removal of ACM Within Full Containment:
 - a. Mist material with amended water. Allow sufficient time for the amended water to penetrate the material to be removed.
 - b. Remove the material using hand tools such as scrapers or putty knives. Wire-mesh or wood lathe reinforcing, when present, shall be cut into manageable pieces and disposed of as ACM.
 - c. Remove any residual material from the substrate using wet cleaning methods and nylon-bristled hand brushes.
 - d. Place the removal material immediately into a properly labeled 6-mil fire retardant polyethylene bag. All material shall be properly containerized and decontaminated prior to removal from the Work Area.
 - e. Following the completion of removal of insulation, all visible residue shall be removed from the substrate
3. Following Removal of ACM utilizing Full Containment Procedures:
 - a. First Cleaning:
 - (1) Clean-up procedures shall involve removal and bagging of the ACM, of visible accumulations of asbestos containing waste, and of all traces of foam or similar viscous liquid. Following the removal of all debris, the work area shall be thoroughly wet cleaned and HEPA vacuumed.
 - (2) Upon request of the asbestos abatement contractor, the Third-Party Air Monitor will perform a visual inspection. Evidence of asbestos contamination identified during the inspection will necessitate further cleaning as heretofore specified.
 - (3) Remove first layer of plastic sheathing inside the Work Area. The isolation barriers and decontamination facility shall remain in place and be utilized.
 - b. Second Cleaning:
 - (1) After the first cleaning, the Work Area shall be vacated for twelve hours to allow fibers to settle.

- (2) All objects and surfaces in the Work Area shall be HEPA - vacuumed and wet cleaned for a second cleaning.
 - (3) A thin coat of lockdown encapsulant shall be applied to all plastic covered surfaces in the Work Area.
 - (4) When the encapsulant is dry, second layer of polyethylene sheeting on the walls and ceiling shall be removed. Do not remove seals from doors, windows, Isolation Barriers or disconnect the negative pressure equipment.
- c. Third Cleaning:
- (1) A minimum of four hours after the second cleaning, all the surfaces in the Work Area shall be HEPA-vacuumed and wet cleaned for a third cleaning.
 - (2) Upon the request of the asbestos abatement contractor, the Third-Party Air Monitor for observing whether cleaned areas are free of dust, dirt, and debris will do final visual inspection for re-occupancy. Evidence of asbestos contamination identified during the inspection will necessitate further cleaning as heretofore specified.
 - (3) When the Work Area passes the Third-Party Air Monitor 's visual re-occupancy inspection, air sampling shall not begin until at least one hour after the completion of the third cleaning. The Third-Party Air Monitor shall perform air monitoring using aggressive testing techniques. The Third-Party Air Monitor will approve re-occupancy if the specified fiber count in the Work Area is achieved according to the Third-Party Air Monitor.
 - (4) When the Work Area passes the re-occupancy test, all controls and seals established shall be removed.
- d. Final Barrier Removal:
- (1) The work area shall be allowed to dry completely before the visual inspection is conducted. The project monitor and asbestos handler supervisor shall confirm the absence in the work area of ACM, asbestos-containing waste or debris, and foam or other viscous liquid.
 - (2) Upon successful visual inspection and acceptable clearance testing results, plastic sheeting shall be removed from baseboards and wall surfaces. Isolation barriers shall remain in place.

- (3) The area surrounding the abatement work place shall be cleaned of any visible debris utilizing HEPA vacuum and wet methods.
 - e. The Third-Party Air Monitor will conduct a final visual observation. Approval must be granted prior to break down of decontamination facility and asbestos abatement contractor demobilization.
- F. Removal of ACM from Vertical Exterior Surfaces utilizing NYCDEP Title 15, Chapter 1 §1-109 Abatement from Vertical Exterior Surfaces procedures shall be as follows:

Preparation procedures: This procedure shall apply to the abatement of asbestos-containing materials from vertical exterior surfaces such as, but not limited to caulking or glazing compounds, asphaltic materials or tar, cement siding or shingles (including transite), paints, sealants coping stone caps or clay roof tiles.

- a. The entire surface to be abated and ground-level perimeter shall be considered the work area unless partitions and warning tape are used to define the work area.
- b. A restricted area shall be established using warning tape extending at least 25 feet from the affected areas of the building or to the nearest vertical obstruction or the curb.
- c. The restricted area may be entered only by certified workers or authorized visitors.
- d. Before plasticizing, the restricted area shall be inspected for ACM debris and, if necessary, pre-cleaned using HEPA vacuums and wet methods.
- e. All openings to the building or structure's interior which are within 25 feet of the affected ACM shall be closed and sealed.
- f. Scaffolding erected to access the ACM shall be constructed, maintained, and used in accordance with applicable federal, state, and city laws.
- g. Horizontal surfaces beneath the affected ACM shall be covered with two layers of fire-retardant 6-mil plastic to a width of six feet.
- h. Elevated platforms being used to access the affected ACM shall be plasticized with two layers of fire-retardant 6-mil plastic, which shall extend up from the platform to at least the height of the mid-rail on three sides, and shall be attached directly to the building just below the surfaces under abatement.
- i. The ground-level restricted area shall be cleared of all moveable objects and plasticized with two sheets of fire-retardant 6-mil plastic, which shall

be extended one foot up the side of the building. The plasticized area shall be ten feet wide for every floor up to a maximum width of thirty feet, or to the curb. This plastic shall be cleaned, replaced, and disposed of as asbestos waste at the end of each shift.

- j. Sidewalk bridges in the restricted area shall be covered with two layers of fire retardant 6-mil plastic, placed over and secured to the bridge, spread across the full width, draped over the side to ground level, and extended to a width of at least thirty feet.
- k. Establish a remote decontamination unit in accordance with Section 3.01 within the restricted area.
- l. Construct all elevated work platforms a minimum of one foot below the surface to be abated.
- m. Pre-Removal Inspections
 - (1) Prior to removal of any ACM, the asbestos abatement contractor shall notify the Project Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.
 - (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.
 - (3) Following the Project Monitor's approval of the Work Area preparations, removal of ACM may commence.

2. Removal of ACM Materials:

- a. Mist material with amended water. Allow sufficient time for the amended water to penetrate the material to be removed.
- b. Remove the caulk using hand tools such as knives or scrapers.
- c. Exercise caution when removing caulking material to prevent damage to windows or skylight openings.
- d. Remove any residual asbestos-containing caulking material from the substrate using wet cleaning methods and nylon-bristled hand brushes. The use of metal bristled brushes is prohibited.
- e. Place the removed material immediately into a properly labeled 6-mil polyethylene bag. All material shall be properly containerized and decontaminated prior to removal from the Work Area.

- f. Following the completion of removal of caulking, all visible residues shall be removed from the substrate.
 - g. Air sampling shall be conducted in compliance with NYC DEP Title 15 Chapter 1, §1-41 Air Sampling Schedule. This sampling shall be performed by the Third Party Air Monitoring Firm.
3. Following Removal of ACM :
- a. The stripped substrate shall be HEPA vacuumed and wet-wiped.
 - b. A visual clearance inspection shall be conducted by the asbestos handler supervisor and project monitor after the work area dries, to ensure the absence of ACM residue or debris in the work area.
 - c. After the inspection is completed, the warning tapes and barriers may be removed.
 - d. The clearance inspection shall be documented in the log and the project air sampling log.
 - e. Air monitoring shall be conducted in accordance with relevant provisions.
 - f. Asbestos abatement contractor shall request and pass a visual inspection performed by the consultant before proceeding to the next step. Documentation of passing this inspection shall be recorded in a daily logbook.
 - g. The Third-Party Air Monitor will conduct a visual observation of the Work Area to verify the absence of asbestos-containing waste materials.
 - h. If the Work is accepted by the Third-Party Air Monitor based on the inspection, asbestos abatement contractor shall be notified. Conduct the following activities in accordance with the contract and all applicable laws, codes, rules and regulations:
 - (1) All waste shall be removed from the Work Area and holding areas.
 - (2) All tools and equipment are to be removed and decontaminated in the decontamination enclosure system.
 - i. If the Work is not approved, the Third-Party Air Monitor will inform Asbestos abatement contractor who will then HEPA-vacuum and/or wet-clean the Work Area. The Third-Party Air Monitor will then perform a subsequent visual observation. This process will continue until the Third-Party Air Monitor accepts the Work Area as clean.

j. Final Barrier Removal

- (1) Upon receipt of acceptable observation results, polyethylene sheeting and barrier tape shall be removed and disposed accordingly as ACM.
- (2) The area surrounding the abatement work place shall be cleaned of any visible debris utilizing HEPA vacuum and wet methods.
- (3) The Third-Party Air Monitor will conduct final visual inspection. Approval must be granted prior to break down of decontamination facility and asbestos abatement contractor demobilization. Other Information: Extra time required to clean Work Areas in order to achieve clearance criteria shall not be considered grounds for an extension of time for contract completion.

G. Removal of ACM Roofing and Flashing Materials utilizing NYC DEP § 1-107 Foam Procedure for Roof Removal shall be as follows:

1. Preparation procedures:

- a. These procedures apply only to the removal of asbestos-containing roofing material (ACRM) from exterior roof surfaces. The work area on the roof shall be cordoned off with clearly visible barriers such as caution tape, and only authorized persons shall have access.
- b. The foam or viscous liquid shall be non-toxic, shall not require special respiratory protection for handling, and shall not affect the handling and disposal of the waste.
- c. The foam or viscous liquid shall coat and maintain a stable blanket (minimum 1" thickness) for the duration of the removal process and shall leave an identifiable colored residue when it dissipates.
- d. The foam or viscous liquid shall wet the ACRM. The ACRM shall be kept wet through the bagging process.
- e. Persons entering the work area shall wear correctly-fitting, good traction rubber boots.
- f. Abatement shall not be carried out during adverse weather conditions (e.g., precipitation, high winds, ambient temperature below 32 degrees Fahrenheit, etc.).
- g. The worker decontamination unit may be attached to each work area at an entry/exit from each work area, or may be remote, in which case it shall be

equipped with an airlock at the entrance. In addition to the shower head(s), the shower room shall be equipped with a flexible hose for waste decontamination for removal of less than 1,000 square feet of ACRM. For 1,000 square feet or more of ACRM removal, a separate waste decontamination facility shall be located at an entry/exit from each work area. Remote holding areas for the asbestos containing waste shall comply with Title 16, Chapter 8, Rules of the City of New York (16 RCNY 8 et. seq.).

- h. Movable objects shall be removed from the work area, or kept in place and wrapped in one sheet of fire retardant 6 mil plastic sheeting.
- i. Provisions shall be made to ensure a safe and adequate air supply to affected building(s). All vents, skylights, air intakes, windows and doors opening onto the roof, and all other openings shall be sealed with 2 layers of fire retardant 6 mil plastic or fitting with HEPA filters when appropriate. Temporary extensions may be installed to a height of 10 feet to ensure adequate air exchange instead of sealing vents, air intakes, etc., with 2 layers of plastic or HEPA filters. Drains may be equipped with 5 micron filtering system in lieu of being sealed.
- j. Fixed objects including perimeter walls, bulkheads, cooling towers, ducts and other rooftop appurtenances shall be covered in one sheet of fire retardant 6 mil plastic up to a height of at least six feet.
- k. THE ASBESTOS ABATEMENT CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE INTERIOR SPACES BENEATH THE ROOF.
- l. All office equipment and furniture, including but not limited to desks, chairs, computers, printers, cabinets, etc., carpeted and wooden floors shall be covered with one layer of 6- mil plastic sheeting.
- m. THE ASBESTOS ABATEMENT CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR IN THE INTERIOR SPACES, INCLUDING BUT NOT LIMITED TO OFFICE EQUIPMENT, FURNITURE, FLOORS, ETC., BENEATH THE ROOF DURING ALL PHASES OF THE ROOF ABATEMENT.
- n. The asbestos abatement contractor shall provide temporary roof protection consisting of 10-mil polyethylene sheeting following abatement over the open roof areas. Strict coordination with the General Asbestos abatement contractor, Construction Project Manager and/or Architect is required and necessary during this phase of abatement.
- o. Preliminary examination shall be conducted and precautions shall be taken to prevent damage to the interior of the building, including but not limited to office equipment, furniture, carpeted and wooden floors, etc., and to ensure no adverse effect on the structural stability of the roof due to the abatement activity.

- p. Abatement activities shall not be carried out during adverse weather conditions (e.g., precipitation, heavy winds, etc.).
 - q. The floor area between the remote decontamination facility and the Work Area must be protected with 2 layers of 6-mil. polyethylene sheeting suitably anchored.
 - r. Provisions shall be made to ensure a safe and adequate air supply to affected building(s). All vents, skylights, air intakes, windows and doors opening onto the roof, and all other openings are to be sealed with two layers of 6-mil plastic or fitted with HEPA-filters where appropriate. In lieu of sealing vents, air intakes, etc., with two layers of plastic or HEPA-filters, temporary extensions may be installed to a height of 10 feet to ensure adequate air exchange. Drains may be equipped with 5 micron filtering systems in lieu of being sealed.
 - s. Pre-Removal Inspections:
 - (1) Prior to removal of any ACM, the Asbestos abatement contractor shall notify the Third-Party Air Monitor and request a pre-removal inspection. Posting of warning signs, building of decontamination enclosure systems, and all other preparatory steps have been taken prior to notification of the Third-Party Air Monitor.
 - (2) Asbestos abatement contractor shall correct any deficiencies observed by Third-Party Air Monitor at no additional cost to City.
 - (3) Following the Third-Party Air Monitor's approval of the Work Area preparations, removal of ACM may commence.
2. Removal of ACM Roofing and Flashing Materials:
- a. The asbestos abatement contractor shall be responsible for the removal of all roofing components, including multiple layers of built-up membrane, tar, vapor barrier and/or flashing down to the substrate/deck.
 - b. Prior to actual removal, the built-up roofing shall be blanketed and wetted with a minimum 1" coating of the acceptable foam or viscous liquid which shall be maintained for the duration of the removal until the material is bagged. The foam or viscous liquid shall be confined to the work area.
 - c. Hand-held power tools used to drill, cut into, or otherwise disturb the ACM shall be equipped with the HEPA-filtered local exhaust ventilation and operated to prevent potential fiber release.

- d. Abatement shall not be performed in adverse weather conditions (e.g., precipitation, heavy winds, etc.). Asbestos abatement contractor shall protect all exposed roof during adverse weather conditions.
 - e. Portable HEPA-vacuum machines shall be available during abatement.
 - f. After the ACM removal and bagging, the bagged waste shall be HEPA-vacuumed, and then wet-cleaned and transferred into the shower room for double bagging. The double-bagged waste shall be transferred outside the clean room for its final transfer for storage in an enclosed waste container.
3. Following Removal of ACM Roofing and/or Flashing:
- a. Upon completion of the abatement in roof work area, clean-up procedures shall involve removal and bagging of:
 - b. The asbestos containing roofing material (ACRM)
 - c. Visible accumulations of asbestos containing waste
 - d. All excess foam or similar viscous liquid
 - e. All debris, and shall be followed by a thorough wet cleaning.
 - f. All tools shall be wet cleaned and HEPA-vacuumed, and then removed from the work area upon completion.
 - g. Following the removal of all debris, the work area shall be thoroughly wet cleaned. The work area shall be allowed to dry completely before the visual inspection is conducted. The inspection shall confirm the absence in the work area of:
 - (1) ACM, debris, bagged ACM waste,
 - (2) Excess foam or other viscous liquid.
 - h. If the work area fails visual inspection, it shall undergo another wet cleaning and/or HEPA vacuuming until it passes the visual inspection.
 - i. When the visual inspection and clearance testing is successful, all plastic may be removed.
 - j. Air monitoring shall be conducted in accordance with the relevant provisions of Air sampling shall be conducted in compliance with NYC DEP Title 15 Chapter 1, §1-41 Air Sampling Schedule.

4.02 MAINTENANCE OF CONTAINED WORK AREA AND DECONTAMINATION ENCLOSURE SYSTEMS

- A. Ensure that barriers are installed in a manner appropriate to the expected weather conditions during the project and for its duration. Repair damaged barriers and remedy defects immediately upon their discovery. Visually inspect barriers at the beginning and end of each work period.
- B. Visually inspect non-Work Areas and the decontamination enclosure system for water leakage. Check the floor below, ceiling and walls, and view beneath/or around the decontamination enclosure system, for signs of leakage. Perform the visual inspection a minimum of two times for each 8-hour work shift.

PART 5 – ASBESTOS WASTE MANAGEMENT

5.01 ACM WASTE REQUIREMENTS

- A. The asbestos abatement contractor and all sub-asbestos abatement contractors are specifically alerted to the illegal practice of combining asbestos-containing waste (ACW) from one project with the ACW of other projects without using the services of a permitted waste transfer station as defined by 6 NYCRR Part 360 and 364. As part of the shop drawing submittals, the Asbestos abatement contractor must submit for approval the proposed method of transportation and disposal that will be utilized to manage the ACW of this Contract. If a permitted transfer station is to be used, the cost shall be included in the work. The asbestos abatement contractor must submit a waste manifest consistent with whatever approved method is utilized as part of the invoicing and payment procedures.
- B. The asbestos abatement contractor shall maintain compliance with the strictest set of regulations of Title 15, Chapter 1 of RCNY, NYC LL 70/85, NYS DOL ICR 56, USEPA, Asbestos Regulation 40 CFR Section 61.152, 29 CFR 1926.1101, 29 CFR 1910.1200 (F) of OSHA's Hazard Communication Standards, and other applicable standards.

NOTE: Any penalties incurred for failure to comply with any of the above regulations will be the sole responsibility for fines imposed due to negligence of the Asbestos abatement contractor.

- C. When presenting ACW for storage at the generation site, the Asbestos abatement contractor shall:
 - 1. Wet down ACW in a manner sufficient to prevent all visible emissions of dust into the air.
 - 2. Seal material in a leak tight container while wet.
 - 3. Keep ACW separate from any other waste.

- D. When presenting ACW for storage away from the site of generation, the Asbestos abatement contractor shall:
1. Ensure that ACW has been properly packaged as per requirements above.
 2. Examine the containers of ACW to ensure that there are no breaks in the containers and that no visible dust is being released into the air.
 3. If examination reveals damage to a container of ACW, the Asbestos abatement contractor or person accepting the waste shall immediately wet down the ACW and repackage it into a clean leak tight container. The subsequent repackaging shall be the financial responsibility of the Asbestos abatement contractor and occur at no extra cost to the City.
 4. Keep ACW separate from any other waste.
- E. When storing ACW – The Asbestos abatement contractor shall:
1. Ensure that the ACW has been sufficiently wetted down in tight containers.
 2. Re-wet and repackage any damaged containers.
 3. Maintain at storage site an adequate supply of spare leak tight containers.
 4. Maintain at storage site an adequate supply of amended water.
 5. Keep ACW separate from any other waste.
 6. Keep ACW in a secured, enclosed, and locked container.
 7. If the Asbestos abatement contractor has intention of sorting a quantity of ACW greater than or equal to 50 cubic yards, the Asbestos abatement contractor shall:
 - a. Submit a written request and receive written approval from the City.
- F. When presenting for transport, the Asbestos abatement contractor shall:
1. Ensure that ACW has been sufficiently wetted down.
 2. Examine the integrity of the container's airtight seal.
 3. Re-wet and repackage any damaged containers.
 4. Keep ACW separate from all other waste.
 5. Ensure that a person transporting asbestos waste holds a valid permit issued pursuant to law.

6. Frequency of Waste Removal:
 - a. Properly packaged and labeled asbestos waste shall be removed from the site on a daily basis. Under no circumstance shall asbestos waste be stored on site without written approval from the City. The Waste Hauler and landfill shall be as indicated on the notifications to regulatory agencies.

- G. Waste Load-out Through Equipment Decontamination Enclosure (Full Decontamination Facility): Place asbestos waste in disposal bags. Large items not able to fit into disposal bags shall be wrapped in one layer of 6-mil thick polyethylene sheeting. Clean outer covering of asbestos waste package by wet cleaning and/or HEPA-vacuuming in a designated part of the Work Area. Move wrapped asbestos waste to the equipment washroom, wet clean each bag or object and place it inside a second disposal bag, or a second layer of 6-mil polyethylene sheeting, as the item's physical characteristics demand. Air volume shall be minimized, and the bags or sheeting shall be sealed airtight with tape.
 1. The clean containerized items shall be moved to the equipment decontamination enclosure holding area pending load-out to storage or disposal facilities.
 2. Workers who have entered the equipment decontamination enclosure system from the uncontaminated non-Work Area shall perform load-out of containers from the decontamination enclosure holding area. Dress workers moving asbestos waste to storage or disposal facilities in clean overalls of a color different than from that of coveralls used in the Work Area. Ensure that workers do not enter from uncontaminated areas into the equipment washroom or the Work Area. Ensure that contaminated workers do not exit the Work Area through the equipment decontamination enclosure system.
 3. Thoroughly clean the equipment decontamination enclosure system immediately upon completion of the waste load-out activities, and at the completion of each work shift.
 4. Labeled ACM waste containers or bags shall not be used for non-ACM debris or trash. Any materials placed in labeled containers or bags, including those turned "inside-out", shall be handled and disposed of as ACM waste.

- H. All asbestos materials, wastes, shower water, polyethylene, disposable equipment and supplies shall be disposed of as asbestos contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York Department of Environmental Conservation and New York City Department of Sanitation.

- I. All asbestos materials shall be prepared for transportation in accordance with this specification and all applicable Federal, State, County and City Regulations. asbestos abatement contractor shall submit the following documentation:

1. Where applicable, an EPA Generator's identification number which has been obtained from the EPA for all asbestos waste generated from the project.
 2. Applicable State Waste Hauler license and registration numbers.
 3. Federal Hazardous Materials Waste Hauler number.
 4. Designated landfill EPA Permit numbers.
- J. Prior to loading asbestos waste the enclosed cargo areas (dumpster) shall be prepared as follows:
1. Clean via HEPA-vacuum and wet wipe techniques the enclosed cargo areas of all visible debris prior to preparing with polyethylene.
 2. Line the cargo area with two layers of 6-mil polyethylene sheeting to prevent contamination from damaged or leaking containers. Floor sheeting shall be installed first and extend up the walls a minimum of 24-inches. Wall sheeting shall be overlapped and taped securely into place.
- K. Asbestos-containing waste shall be placed on level surfaces in the cargo area of the dumpster and shall be packed tightly to prevent any shifting or tipping of the waste during transportation.
- L. Asbestos-containing waste shall not be thrown into or dropped from the dumpster. All material shall be handled carefully to prevent rupture of the containers.
- M. All personnel engaged in handling and loading of asbestos contaminated waste outside of the Work Area shall wear protective clothing. The disposable clothing shall include head, body and foot protection and color of clothing shall be different from abatement personnel in the Work Area. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters.
- N. Asbestos abatement contractor shall immediately clean debris or residue observed on containers or surfaces outside of the Work Area. Cleaning shall be via HEPA equipped wet/dry vacuums only.
- O. All asbestos-containing waste shall be transported from the abatement site to the landfill by a registered Waste Hauler. When transporting ACW:
1. Ensure that the ACW has been sufficiently wetted down in a leak tight container.
 2. Re-wet and repackage any damaged containers.
 3. Maintain at storage site an adequate supply of spare leak tight containers.
 4. Maintain at storage site an adequate supply of amended water.

5. Keep ACW separate from any other waste.
- P. Keep ACW in a secured, enclosed, and locked container.
- Q. Waste transport documents shall conform to the requirements of the U.S. Department of Transportation, Hazardous Materials Transportation Regulation, 49 CFR Part 173 and EPA 40 CFR 61.150 (d)(1)(2). Shipping documents shall be clearly marked with the required designation "RQ Asbestos". Asbestos abatement contractor shall provide a copy of this document to the City.
- R. A uniform hazardous waste manifest shall be prepared by the asbestos abatement contractor and signed by the asbestos abatement contractor each time the asbestos abatement contractor ships a dumpster load of Asbestos-Containing Waste Material. The uniform hazardous waste manifest shall include the site of waste generation, the names and addresses of the Transporter, the asbestos abatement contractor, and the landfill operator with information on the type and number of asbestos-waste containers, time and date. Asbestos abatement contractor shall provide the Construction Project Manager, Third-Party Air Monitor or authorized designated representative with signed copies of the waste manifest before each departure.
- S. Asbestos abatement contractor or his registered hazardous Waste Hauler shall transport asbestos-containing waste material from the abatement site directly to the specified disposal site. Asbestos abatement contractor or their Waste Hauler shall not accept material from any other site when transporting asbestos-containing waste material from the abatement site. The authorized City of New York representative or Construction Project Manager reserves the right to travel with asbestos abatement contractor's Waste Hauler to the waste disposal site. No intermediate storage of waste material (i.e., asbestos abatement contractor's warehouse) shall be permitted.
- T. Final or progress application for payments will not be processed unless all hazardous waste manifests generated to date have been received and reviewed by the Construction Project Manager.
- U. All asbestos materials, wastes, shower water, polyethylene disposable equipment and supplies shall be disposed of as asbestos contaminated waste, in accordance with the EPA regulation (40 CFR, Section 61.150) and those requirements of the New York State Department of Environmental Conservation and the New York Department of Sanitation.
- V. Asbestos abatement contractor shall transport all sealed drums to a landfill disposal site approved by the Department of Environmental Conservation and the EPA. Transportation shall be performed by a New York State registered Waste Hauler, where required. When presenting the ACW for disposal the Asbestos abatement contractor or sub Asbestos abatement contractor shall:
 1. Ensure that waste container is properly labeled according to the National Emission Standard for Hazardous Air Pollutants (NESHAP); Asbestos Revision, 40 CFR, Part

- 61, Subpart M. The labels shall include the name of the waste generator and the location where the waste was generated.
2. Comply with all applicable orders issued pursuant to asbestos disposal.
 3. Ensure that ACW has been sufficiently wetted down.
 4. Re-wet and repackage any damaged containers.
 5. Keep ACW separate from all other wastes.
- W. Asbestos abatement contractor shall notify the waste disposal site, at least 24 hours prior to transportation of asbestos contaminated waste to be delivered. Asbestos abatement contractor shall determine if a larger notification period is required.
- X. At the site asbestos abatement contractors or Waste Hauler trucks shall approach the dump location as close as possible for unloading asbestos waste. Containers shall be carefully placed in the ground. Do not throw containers from truck.
- Y. Asbestos abatement contractor or Waste Hauler shall inspect containers as they are unloaded at the disposal site. Material in damaged containers shall be repacked in empty containers, as necessary.
- Z. Asbestos abatement contractor or Waste Hauler shall not remove asbestos-containing waste Material from drums unless required to do so by the disposal site City. Used drums shall be disposed of as asbestos-asbestos contaminated waste.
- AA. All personnel engaged in unloading of the containers at the waste site shall wear protective clothing. The disposable clothing shall include head, body and foot protection. Minimum respiratory protection shall be half face, dual cartridge, air purifying respirators with HEPA-filters. Workers shall remove their protective clothing at the disposal site, place it in labeled disposal bags and leave them with the deposited waste shipment.
- BB. For the compaction operation, the asbestos abatement contractor shall ensure that disposal sites personnel have been provided with personal protective equipment by the disposal operator. If the disposal site City has not provided this protective equipment, the asbestos abatement contractor shall supply protective clothing and respiratory protection for the duration of this operation (PAPR respirators are mandatory).
- CC. If containers are broken or damaged, the asbestos abatement contractor or Waste Hauler shall, using personnel who are properly trained and wearing proper protective equipment, shall repackage the waste in properly labeled containers. Asbestos abatement contractor shall then clean the entire truck and its contents using HEPA-vacuums and wet cleaning techniques until no visible residue is observed.
- DD. Following the removal of all containerized waste, the asbestos abatement contractor shall decontaminate the truck cargo area using HEPA-vacuums and/or wet cleaning

techniques until no residue is observed. All 6-mil polyethylene sheeting shall be removed and discarded as asbestos-containing waste material along with contaminated cleaning material and protective clothing, in containers at the disposal site.

- EE. The transporter(s) of all asbestos waste shall not back-haul any items on his return from landfill/disposal site.
- FF. All asbestos waste shall be disposed of in an approved Asbestos Landfill site only.
 - 1. NO PERSON UNDER ANY CIRCUMSTANCES SHALL ABANDON ACW. The same shall be disposed of only by certified persons in approved landfills.
 - 2. A manifest form will be signed by the Landfill documenting receipt and acceptance of the asbestos-containing waste. This manifest will be furnished to the City of New York within thirty calendar days from the project completion date.
 - 3. It is the responsibility of the Asbestos abatement contractor to determine current waste handling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Asbestos abatement contractor must comply fully with these regulations and all appropriate U.S. Department of Transportation, EPA and other Federal, State and Local entities' regulations and all other current legal requirements.
 - 4. The asbestos abatement contractor shall obtain an agreement from the transporter (s) that the practice of "Back-Hauling" will not be engaged in, with respect to any and all waste loads taken from this site during the work.
 - 5. The asbestos abatement contractor will document actual disposal of the waste at the designated landfill by having completed a Disposal Certificate and will provide a copy of the same to the Department of Design and Construction.

PART 6 – ACCEPTANCE

6.01 ACCEPTANCE

Upon satisfactory completion of all decontamination procedures, a certificate will be issued by the Construction Project Manager with copies to all parties.

- A. A letter of Compliance stating that all the work on the project was performed in accordance with the Specifications and all applicable Federal, State and Local regulations.
- B. All warranties as stated in the Specifications.

END OF SECTION

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SECTION 02 83 13

LEAD HAZARD MANAGEMENT

PART 1 - GENERAL

1.01 SCOPE:

- A. Perform all work necessary to carry out the proper management and control of all flaking or chipping lead based paint (LBP) from all walls, tanks, piping and equipment and lead-contaminated dust/debris in accordance with all applicable laws, codes, rules and regulations and in accordance with the requirements set forth in this section. Provide all appropriate controls and protection for worker exposure to lead based paint in accordance with OSHA requirements.

1.02 REGULATORY REQUIREMENTS:

- A. Applicable guidelines and standards listed in this Scope of Work include, but are not limited to, the following:
1. New York State Department of Environmental Conservation
6 NYCRR Subparts 371-376
 2. Code of Federal Regulations (CFR) Publications:
 - 29 CFR,, Part 1926.62 Lead Exposure in Construction; Interim Final Rule Vol. 58, No. 84
 - 40 CFR 61, Subpart A General Provisions (Hazardous Air Pollutants Listing)
 - 40 CFR 61.152 Standard for Waste Manufacturing, Demolition, Renovation, Spraying and Fabricating Operations
 - 40 CFR 241 Guidelines for the Land Disposal of Solid Wastes
 - 40 CFR 257 Criteria for Classification of Solid Waste
 - 40 CFR 281 Identification and Listing of Hazardous Wastes
 - 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
 3. American National Standards Institute (ANSI) Publications:
 - Z88.2-80 Practices for Respiratory Protection
 - Z87.1 Eye Protection
 4. Steel Structure Painting Council (SSPC)
SSPC Guide 6 (CON): Guide for Containing Debris Generated During Paint Removal Operations

1.03 WORKER PROTECTION:

A. General

1. Any surface coating and/or underlying substrate containing lead in any concentration that shall be disturbed shall be treated as a potential lead hazard to workers in accordance with 29 CFR 1926.62 (Lead Exposure in Construction: Interim Final Rule - May 1993). This standard applies to all construction work in which lead in any concentration is present.
2. The Contractor shall be responsible for maintaining a program in accordance with 29 CFR 1926.62 at minimum and shall be responsible for protecting and training his employees on worker safety, health hazards, etc. relating to lead. The following sections must be addressed by the Contractor in a lead health and safety program. This program shall be incorporated into the Contractor's written safety plan. These sections are not intended to constitute an exhaustive summary of all relevant obligations. The Contractor should consult the following publications and/or competent environmental counsel.

OSHA - 3079 Respiratory Protection

OSHA - 3142 Lead in Construction

B. Exposure Assessment/Personal Air Monitoring

1. Exposure assessment is the primary means of determining to what airborne level of lead workers are being exposed. The Contractor shall insure that workers are not exposed to lead at concentrations greater than the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) over an eight-hour time weighted average (TWA). The Contractor must initially determine if any employee is exposed to lead at or above the PEL. Until the findings of this initial exposure assessment indicate that the airborne concentrations do not exceed the PEL, the Contractor must provide respirator protection that shall adequately prevent worker exposure to airborne lead above the PEL. At a minimum, respirators must have a protection factor of at least ten. The Contractor must make this initial exposure assessment by personal air sampling representative of a full shift, including at least one sample for each job classification in each work area, either for each shift or for the shift with the highest exposure level.
2. If available, use exposure assessment data obtained within the last 12 months from previous jobs conducted under similar work conditions, control methods, work practices, and environmental conditions to be used in this contract or other objective data to demonstrate that work activities in this contract shall not exceed the PEL, provided that the assessment entailed comparable lead concentrations in coating materials, work practices, engineering controls, and rates of work.

3. Until the exposure assessment is performed, the Contractor must provide to his workers the following: respiratory protection with a protection factor of at least ten, personal protective clothing, lead-free change areas, hand washing facilities, biological monitoring and training

C. Medical Surveillance

Provide medical surveillance to workers until exposure monitoring reveals that workers are not exposed on any day of the job to airborne lead at or above the Action Level of 30 $\mu\text{g}/\text{m}^3$. This consist of a blood test measuring the level of lead and zinc protoporphyrin by a licensed physician. Further testing and medical exams may be necessary depending on the results of initial blood tests and/or the initial exposure assessment as stated in CFR 1926.62.

D. Training

Before workers start a job in a leaded environment, they must receive training. This training must include a description of the OSHA lead standard, the sources of lead exposure, the uses and limitations of respirators, the purpose of getting a blood lead test, the purpose of the initial exposure assessment, their rights to the results of the blood tests and air monitoring and the methods of controlling the level of lead exposure to a minimum.

E. Written Program

Have a written lead health and safety program which is to be submitted to LiRo for written approval and imposed on all of his employees involved in operations that disturb or remove lead paint or lead dust or dirt for this contract. The program, at a minimum, shall address respirator protection that is in full compliance with all aspects of 29 CFR 1910.134, exposure assessment, signs to be posted in work areas, protective clothing, engineering and administrative controls, hygiene facilities and practices, decontamination, housekeeping, medical surveillance, training and other items to satisfy OSHA standards as required.

F. Respirator Protection

1. Have a respirator protection program in accordance with 29 CFR 1910.134. If respirators are necessary, the Contractor shall have his employees medically approved to wear respirators, establish and submit a written respirator program, select the proper respirator for the level of exposure to be encountered on the job, and have workers fit-tested to insure proper fit.
2. The minimum respiratory protection requirements for lead paint removal operations and lead-paint clean-up operations and for the disturbance of any other lead containing material for this contract shall be as per 29 CFR 1926.62 which includes job categories and functions where workers may be exposed to lead, including but not limited to, manual scraping, sanding, abrasive blasting, painting, clean-up operations and containment breakdown.

3. All workers are required to don an appropriate level of protection commensurate with the airborne concentrations of lead in which they are working. The level of protection shall be determined by the Contractor, based on objective air monitoring data.

G. Controlling Lead Exposure

Engineering and work practice controls are the primary means of maintaining exposures to lead below the PEL. Paint removal and surface preparation activities must keep dust level at a minimum. Torch cutting of surfaces with LBP shall require appropriate PPE and exposure controls. Power tools must be equipped with vacuum shrouds with high efficiency particulate air filters (HEPA). Eating and drinking must be prohibited in the work area. Hand washing facilities must be provided. All personal protective clothing shall be removed at the end of the day.

1.04 LEAD ABATEMENT:

A. General

1. Ensure that work plans and work methods utilized for lead abatement conform to all applicable laws, codes, rules and regulations, including, without limitation, the federal statutes governing lead Exposure Reduction, 15 U.S.C.A. Section 2681 et. seq., and OSHA regulation 29 CFR, Part 1926.62; Lead Exposure in Construction, Interim Final Rule.

B. Work Plans

1. The Contractor shall be required to prepare task specific Work Plans prior to starting Work detailing how he shall accomplish each task of work related to the disturbance of any lead containing paint surface or material. In each case the Contractor shall prepare the work plan with the needs, logistics and constraints of the individual job in mind, taking into account such factors as paint removal method, worker safety, proximity to the public, protection of the environment including containment and air monitoring requirements, condition of the underlying substrate and surface preparation where painting post abatement is required. Torch cutting of LBP surfaces should be avoided and shall require exposure control measures including exposure monitoring and respiratory protection.
2. The Work Plans shall also include methods of minimizing and containing the generation of all dust, including dust generated while cleaning up construction and demolition debris. These methods may include such techniques as wet mopping and/or wiping, HEPA vacuuming or the use of a negative pressure ventilation system where lead dust is generated. Once the Work has been

complete and debris has been properly removed from the Site, all surfaces shall be free and clear of visible dust. All work areas shall be cleaned on a daily basis at the end of each shift.

3. At no time shall the Contractor be permitted to perform any Work which may impact upon lead containing material until the Work Plan has been approved.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 PROTECTION OF ADJACENT AREAS AND THE ENVIRONMENT:

A. General

1. Areas of deteriorated paint requiring abatement (removal) are present throughout the Sealed Incinerator Rooms portion of the facility. Lead-based paint was also identified in the M2 Garage, Salt Shed and MTS. In the event lead containing material is to be disturbed during any phase of the work, take all necessary actions to ensure that all dust and debris is contained within the work area and that activities in no way results in the contamination with lead dust of any adjacent areas, building, or the environment.

B. Containment

1. In the event a containment structure is required, ensure that such containment prevents lead containing materials (LCM) from contaminating adjacent areas, building, or the environment in any fashion. This shall include any water runoff from wet removal methods. If a containment structure is not specified, the Contractor shall specify paint removal tools and methodologies which are fitted with HEPA filter vacuum shroud attachments or are otherwise designed to eliminate the possible release of LCM emissions into the air (i.e., chemical strippers).

C. Contamination

1. If it is determined by visual identification that adjacent areas, buildings, or the environment have been contaminated as a result of the Contractor's work, the Contractor agrees to clean the affected premises at no charge and be responsible for all costs incurred by this clean-up activity.

3.02 DISPOSAL REQUIREMENTS:

A. General

1. The Contractor shall perform sampling and analysis using Toxicity Characteristic Leaching Procedure (TCLP) required to assure the proper and legal handling of the waste. Wastes to be characterized include all materials coated with LBP including, but not limited to, concrete, brick, metal, and wood. All removed LBP material/residue shall also be characterized for proper disposal. Samples may be composited for analysis with the consent of the Commissioner. If any chemical analysis or sampling is performed by or on behalf of the Contractor, its Transporter, or its Treatment Storage and Disposal Facility (TSD), a copy of such analysis must be provided to the Commissioner at no additional cost. (Note: Painted metal may be designated as recyclable and disposed of at a scrap metal facility for reuse or resale.)
2. Ensure that the waste disposal Subcontractor warrants and represent possession of all permits and/or licenses required under the Resource Conservation's and Recovery Act (RCRA) as well as any state or local permits or licenses required for removal, repacking, transportation and disposal of hazardous waste.
3. All hazardous waste materials removed hereunder must be lawfully treated and disposed by the waste disposal Subcontractor at an Environmental Protection Agency (USEPA) permitted Treatment Storage and Disposal Facility.
4. All wastes, drums, and other items removed hereunder must be lawfully treated and disposed of by the Contractor's waste disposal Subcontractor within thirty (30) days after the removal from the Site. Ensure that the waste disposal Subcontractor provides completed shipping documents for all hazardous wastes removed, which contain the information required under 40 CFR Part 262 Subpart B (hereinafter the "Manifest Form") and 6 NYCRR Part 372 as well as all Certificates of Disposal which specify where each component of all wastes removed from the property is ultimately treated or disposed. Such Certificates shall include references to the Manifest Form for the shipment as well as address and USEPA identification numbers for the generator facility.
5. Ensure that all TSD facilities or transporters which the waste disposal Subcontractor intends to use to treat and/or dispose of hazardous waste picked up hereunder are approved for use by the Commissioner prior to any delivery of waste by the waste disposal subcontractor to such TSD facility.
6. Should any problems arise regarding the TSD facility chosen to accept the waste for treatment and disposal that would require the return of waste or should such TSD facility have violated any environmental regulation which would result in regulatory enforcement action, ensure that the waste disposal Subcontractor immediately notifies the Contractor and Commissioner in writing of such situation, identifies an alternative TSD and obtains written approval from the Commissioner for disposal at such TSD.

7. Insure that the waste disposal Subcontractor provides completed shipping documents, hereinafter referred to as "Bills of Lading" for all nonhazardous "industrial" waste removed from the property. A Bill of Lading must accompany each waste shipment and must include information regarding the quantity and type of waste, the waste transporter name, and the date of removal from the property.

B. Transportation Requirements

1. Insure that the waste disposal Subcontractor providing waste transportation services possesses a valid Waste Hauler's permit issued pursuant to the New York State Department of Environmental Conservation (NYSDEC) regulations, 6 NYCRR Part 364. In addition, if the waste is to be transported and disposed of out of New York State, permits for those states through which the waste shall be transported and for where it shall be disposed may be required. It is the Contractor's responsibility to insure that the waste disposal Subcontractor correctly determines which permits are required and to provide such permits for review and approval of the Commissioner.
2. Packaging and transporting of all wastes shall be in accordance with the applicable sections of the Department of Transportation (DOT) regulations.

3.03 QUALIFICATIONS:

- A. The Contractor and/or Subcontractors involved in any activity which may impact upon lead paint or other lead-containing materials (i.e., lead paint sampling, lead abatement, and abatement design) shall have demonstrated two years of experience in lead hazard assessment and management, environmental and personal air monitoring, worker protection and training, and lead remediation specification writing.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met.

END OF SECTION

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SECTION 02 84 16

REMOVAL OF UNIVERSAL WASTE

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. The Contractor shall furnish all labor, materials, tools, equipment, utilities and other services necessary for the removal, characterization, transportation, and disposal/recycling of all contaminated materials, hazardous wastes, and universal waste from the City of New York's facilities at the Gansevoort Peninsula including the Marine Transfer Station (MTS) which is constructed on the connected pier and any other specific locations indicated in the specifications or as directed by the Commissioner or the City of New York. All hazardous and specialty regulated materials for removal and disposal will be included in this scope of work unless a specific item is otherwise identified for disposal/recycling elsewhere in this specification.
- B. The Contractor is responsible for choosing appropriate treatment/recycling/disposal facilities and identifying those facilities to the Commissioner. Disposal of all waste streams must be at permitted TSDF's in compliance with all regulatory requirements. In addition, the Contractor is responsible for all sampling and analysis requirements specified by the receiving disposal or recycling facilities.

1.02 RELATED DOCUMENTS:

- A. The Contractor shall be held to have read all of the Bidding Requirements; all of the General Conditions and Supplementary General Conditions, and all Sections of the Technical Specifications before submitting a bid for the proposed work, and in the execution of the work, the Contractor shall be bound by all of the conditions and requirements therein.
- B. Two Hazardous Materials Survey Reports dated January 23, 2009 and included as an appendix to this specification shall form a part of and be included in this section. The Contractor shall be responsible for the removal and disposal of all materials as identified in the Hazardous Materials Reports.

1.03 GENERAL HAZARDOUS AND UNIVERSAL WASTE REMOVAL:

- A. This section includes a listing of the types of wastes that the Contractor will be required to develop precautions and procedures to be followed to protect against the contamination of the building and Site; allow for the safety of his workers and the public; and, to identify proper means of treatment, storage and disposal. The inventory totals are identified in the Hazardous Materials Survey Report.
 - 1. Mercury vapors contained within fluorescent light bulbs or tubes, metal halide, or high-intensity discharge (HID) lamps;

2. Mercury containing thermostats, thermometers and gauges;
 3. Lead acid and other batteries;
 4. Fire extinguishers;
 5. Compressed refrigerant gasses (ozone depleting substances as defined by the Clean Air Act – CFC, HFC, HCFC or virgin refrigerants);
 6. Fluorescent or HID light fixture ballasts containing polychlorinated bi-phenyls (PCBs) or di-2-ethylhexyl phthalate (DEHP) liquids;
 7. Miscellaneous paint products, oils, lubricants, fuels, cleaning supplies and other various unknown chemical products, etc., stored on-site in spray cans, quart or gallon containers, 5-gallon buckets and 30-gallon and 55-gallon drums;
 8. Removal and disposal of lubricants and other hazardous liquids associated with various accessible mechanical equipment reservoirs including motors, pumps, boilers, and compressors;
 9. Petroleum products present within the aboveground storage tanks used for City of New York operations. ASTs are to be properly drained cleaned and removed in accordance with specification section 02 65 00.10 – Above Ground Storage Tank Removal and Disposal;
 10. PCB containing dielectric liquids present in the electrical transformer and disposal of the drained transformer carcass. Contractor shall develop bid pricing assuming PCB concentrations of the liquid are greater than (>) 500 parts per million (ppm). Liquid volume is estimated at 250 gallons. Contractor shall be required to test the PCB concentration of the fluids present in the transformer to confirm their proper disposal requirements. Contractor shall also be responsible for the disposal of the drained transformer; and,
 11. PCB light Ballast. Given the age of the structure all ballasts are assumed to contain either poly chlorinated biphenyls (PCBs) or di-2-ethylhexyl phthalate (DEHP). PCBs were used in the manufacture of ballasts until 1979. ALL ballasts shall be handled and disposed of as PCB containing ballasts.
- B. The Contractor shall develop all applicable waste manifests, shipping papers, profile sheets, land ban forms and any other documentation and coordinate with the City of New York and the Commissioner regarding proper signatures. The Contractor is to establish a EPA hazardous waste generator number as agent to the City of New York for the project, that is to be utilized by the Contractor in the performance of the work for the transport of all hazardous materials.
- C. The work area includes all areas where the above referenced materials slated for

removal and subsequent disposal are found. For general locations and quantities, refer to the Hazardous Materials Survey Reports listed below and associated figures, drawings, and photographs.

"Final Report of Hazardous Materials Survey (Salt Shed, M2 Garage, M5 Garage, Marine Transfer Station [MTS]), Demolition of All The City of New York Department of Sanitation (DSNY) Facilities Including The MTS at The Gansevoort Peninsula, 2 Bloomfield Street", dated 11/30/2012

"Final Report of Hazardous Materials Survey (Sealed Incinerator Rooms), Demolition of All The City of New York Department of Sanitation (DSNY) Facilities Including The Marine Transfer Station (MTS) at The Gansevoort Peninsula, 2 Bloomfield Street", dated 12/06/2012

- D. The Contractor will be required to perform any demolition required to locate and remove any universal wastes, identified wastes, transformer and tank carcasses, and other items identified in this specification for removal.
- E. The Contractor shall manage all surplus materials and waste generated in the performance of the Contract in accordance with applicable Federal, State, and local laws and regulations. No section herein is intended to prevent the Contractor from removing surplus material or waste to appropriate off-site locations for beneficial reuse, recovery or recycling purposes. The Contractor is encouraged to reuse, salvage or recycle materials to the maximum extent possible.
- F. The Contractor shall have the following qualifications:
 - 1. Performance of projects in the previous three years that are similar to the work required for this project.
 - 2. Performance of hazardous materials removal work on a project where significant asbestos abatement and general demolition work was also present.
 - 3. It has developed and employed a Work Plan, Contingency Plan, and Site-Specific Health and Safety Plan similar to that required for this project.
 - 4. It has established a Quality Control Program that includes hazard communications and chemical hygiene plans; employee background checks and medical testing; and, waste determination procedures and guidelines.
 - 5. It has a project manager available for this project experience performing similar work; field experience for similar projects; all required training certifications; fluent in the English language and capable of communicating with all the staff; and, is experienced in visual inspection, handling, cleaning, storage and field characterization of hazardous materials similar to those anticipated on this project.

6. For firm and persons specified above, submit documentation and resumes to demonstrate their capabilities and experience. Include a list of completed projects with project contact names, addresses, and phone numbers.
7. For all employees, completion of 40-hour OSHA HAZWOPER training, annual 8-hour OSHA HAZWOPER refresher training, and proof of annual medical physicals and respirator fit tests.

1.04 RELATED SECTIONS:

- A. The General Conditions
- B. Section 02 00 20 Environmental Health and Safety.

1.05 SUBMITTALS:

- A. Name, address, and USEPA and NYSDEC permits or licenses (as appropriate), of all proposed recyclers.
- B. Name, address, and USEPA and NYSDEC permits or licenses (as appropriate), of all waste transporters/haulers.
- C. Name, address, and USEPA and NYSDEC permits or licenses (as appropriate), of recipient landfill and incinerators.
- D. Following final removal, and disposal/recycling or destruction, the Commissioner shall be provided with waste transport and disposal/recycling documents (e.g., manifests), as well as certificates of destruction as appropriate.
- E. The Contractor shall be required to submit a Work Plan explaining the personal protective equipment, methods and procedures utilized for fluorescent light bulb and ballast, and other environmental chemicals and materials handling and disposal/recycling. Submission shall be made at least 21 days prior to the anticipated start of work for review by the Commissioner prior to the commencement of activities. The plan shall include:
 1. List of the employees scheduled to perform this work.
 2. Schedule of start and finish times and dates for this work.
 3. Name and address of disposal, incineration and recycling facilities where these waste materials are to be sent. Include contact person, facility address and telephone number. Plan must include a copy of each disposal/treatment facilities current operation permit that indicates both the type of materials allowed and not allowed for disposal/treatment/recycling.

4. Name, address, phone number, responsible contact, and license/permit information (NYS and/or USEPA/USDOT Waste Transporter ID number) from all identified transporters.
 5. Material Safety Data Sheets (MSDS) for any chemical materials to be used to facilitate this work.
 6. The Work Plan must include a Spill Contingency Plan for handling waste spills and releases and the emergency procedures to be followed by Contractor personnel. Contractor shall maintain minor spill cleanup equipment and supplies including absorbent pads, wipes and mini-booms. All temporary waste storage must be within a containment area constructed by the Contractor that meets USEPA Container Storage Regulation 40 CFR 264.175. Preparedness and prevention features and contingency planning and emergency procedures shall be developed per 6 NYCRR 373-3.3 and 373-3.4, respectively.
 7. A description of appropriate security measures that shall be provided for the protection of hazardous waste while stored on-site.
 8. Provide a description of the methods, procedures and materials to be used in performing the work and handling all hazardous wastes.
 9. Provide a description of any samples to be taken and the parameters to be analyzed. Identify the laboratory providing the services.
 10. The method of recycling or treatment/disposal that will be used for each waste stream.
- F. The Contractor shall be required to submit a Site-Specific Health and Safety Plan either separately or as part of the Work Plan that includes the Contractor's Respiratory Protection Program. Submission shall be made at least 21 days prior to the anticipated start of work for review by Commissioner prior to the commencement of activities. In addition, Contractor shall provide:
1. Certificates for all on-site supervisor(s) and workers that they have satisfactorily completed the OSHA 40 hour Health and Safety course for handling hazardous materials along with proof of current 8-hour annual refresher.
 2. All documentation to show the Contractor and his personnel meet the qualifications as described under Section 1.2F.
 3. Certification of medical examinations completed within the past 12 months.
 4. Copy of their respiratory protection program.
 5. Certificates of respiratory fit test completed within the past 12 months.

1.06 CODES AND REGULATIONS:

- A. The following is a list of many of the relevant Federal and State laws, regulations, codes and guidelines that the Contractor shall follow and be familiar with. This list is by no means exhaustive and the Contractor shall be required to meet and comply with all applicable, relevant, and appropriate Federal, State and Local laws and codes.
1. Toxic Substances Control Act (TSCA), USEPA (1976).
 2. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), USEPA (1980).
 3. USEPA 40 CFR 170, Preparation of Hazardous Materials for Transportation.
 4. USEPA 40 CFR Parts 260-272, Resource Conservation and Recovery Act (RCRA).
 5. 40 CFR Part 273, Universal Waste Rule.
 6. USEPA 40 CFR 761 (PCBs).
 7. USDOT 49 CFR Parts 100-180, Hazardous Materials Regulations.
 8. 6 NYCRR Part 361, Solid Waste & Material Recovery Facilities.
 9. 6 NYCRR Part 362, Solid Waste Combustion, Transfer and Processing Facilities.
 10. 6 NYCRR Part 363, Solid Waste Landfills.
 11. 6 NYCRR Part 364, Waste Transporters.
 12. 6 NYCRR Part 365, Biohazard Waste Management Facilities.
 13. 6 NYCRR Part 370, Hazardous Waste Management System.
 14. 6 NYCRR Part 371, Identification and Listing of Hazardous Waste.
 15. 6 NYCRR Part 372, Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.
 16. 6 NYCRR Parts 373-1 through 373-4, TSDF Facilities and Standards.
 17. 6 NYCRR Subpart 374-3, Standards for Universal Wastes.
 18. 6 NYCRR Part 376, Land Disposal and Treatment Standards.
 19. OSHA 29CFR 1910, Occupational Safety and Health Standards.

20. OSHA 29CFR 1926, Safety and Health Regulations for Construction.
 21. Universal Waste Rule as described in the Federal Register.
- B. The Contractor is required to secure and maintain all required regulatory permits necessary to perform all aspects of the work. The Contractor shall containerize and store waste in accordance with all applicable regulations. The Contractor and Waste Haulers will be responsible for all required placards and labeling.

1.07 COMPLIANCE:

- A. Compliance with any obligation based upon Federal, State, or local environmental, public health, or safety laws, rules, regulations or requirements shall be coordinated with the City of New York or the Commissioner.

1.08 WASTE RECORD SYSTEM:

- A. The Contractor shall establish a record system that accounts for all waste. The Contractor must be able to document custody of all waste from the time it is removed from the work area until it is disposed of, recycled or incinerated at an approved facility. All containers are to be appropriately marked/labeled.
- B. All the original manifests, bills-of-ladings and any receipts or certifications generated during the handling and disposal processes shall be provided to the Commissioner.
- C. Final manifests and documents must be provided to the Commissioner within 30 days of the removal of contaminated materials from the Site by the waste hauler or as required for the applicable regulations. No progress payments will be made if this is not accomplished.

1.09 DEFINITIONS:

- A. Hazardous Waste - shall be any material that possesses at least one of four characteristics (ignitability, reactivity, corrosivity, or toxicity) or is a F, P, K or U listed waste as regulated under both the Federal Resource Conservation and Recovery Act (RCRA) and with applicable State regulations or a material that appears on Federal or State lists.
- B. Hazardous Waste Landfill - a landfill permitted under RCRA Subtitle C and engineered to contain hazardous wastes. Incoming wastes are manifested by the generating facility and may be subject to treatment standards.
- C. Chemical Waste Landfill - a landfill permitted under the Toxic Substances Control Act (TSCA) that accepts hazardous substances.
- D. TSDF - Permitted/licensed treatment, storage or disposal facility.

- E. Waste Management – Shall mean the collection, packaging, transportation, transfer, processing, recovery, storage, reclamation, treatment, handling and disposal of waste whether performed directly by the Contractor or his Sub Contractor.
- F. Ballast – a device, typically located in the lamp fixture (luminaire), used to operate fluorescent and HID lamps. Fluorescent and HID lamp ballasts contain a small capacitor that may contain high concentrations of PCBs. Some ballasts manufactured between 1979 and 1991 contain the PCB replacement DEHP. For this project all ballast shall be considered to contain PCBs and shall be disposed of as a PCB containing waste as outlined in Part 3 of this specification
- G. High Intensity Discharge (HID) Lamps – a generic term that refers to mercury vapor, metal halide and high and low-pressure sodium light sources. HID lamps contain mercury.
- H. PCB Transformer – a transformer that contains PCBs at concentrations greater than 500 parts per million (ppm).
- I. PCB-Contaminated Electrical Equipment – means any electrical equipment including transformers that contains PCBs at concentrations of greater than 50 ppm and less than 500 ppm in the contaminating fluid.

PART 2 – PRODUCTS

2.01 GENERAL:

- A. Contractor shall be responsible for identifying the appropriate shipping containers. Some examples include 35 or 55 gallon metal or fiber drums, with lids that can be secured and sealed for ballasts; RC-4, RC U-Bent and RC-HID lamp recycling cartons; lab packs or over-packs for containerized liquids (paints, thinners, cleaning fluids, etc). Drums or containers must meet the required OSHA, USEPA (40 CFR Parts 264-264 and 300), and DOT Regulations (49 CFR Parts 171-178).
- B. Contractor shall provide the appropriate waste labels identifying contents as regulated TSCA, Universal Waste, and RCRA hazardous wastes as defined by USEPA, NYSDEC and all other applicable Federal and State regulations.
- C. Contractor shall provide refrigerant recovery tanks and cylinders to hold and temporarily store compressed refrigerant gasses (ozone depleting substances as defined by the Clean Air Act – CFC, HFC, HCFC or virgin refrigerants).

PART 3 - EXECUTION

3.01 GENERAL:

- A. Procedures and methods contained herein are to provide guidance to protect from the contamination of the environment and exposure to workers, while handling

contaminated materials, hazardous wastes, and universal waste, and their respective components during disassembly for disposal/recycling/destruction.

- B. Removal and disposal/recycling of all mercury fluorescent and HID lights, mercury gauges, and batteries will follow all Universal Waste Rule requirements.
- C. On-site recovery and recycling of refrigerants, if required, must be conducted in compliance with the Clean Air Act (CAA) and by authorized and certified personnel as defined in Section 608 of the CAA.
- D. Removal and recycling/disposal of lubricants, petroleum based products, and other chemicals from mechanical equipment will be conducted in a manner to prevent releases to the environment.

3.02 PERSONAL PROTECTIVE EQUIPMENT:

- A. Personal protective equipment (PPE) shall consist of (at a minimum) safety goggles or other protective eye-ware, work shoes with non-slip soles and steel toes, chemical resistant gloves that cover the hand (e.g., neoprene or nitrile gloves), an apron that covers the front of the worker's body from shoulder to calves or disposable Tyvek coverall, and respiratory protection.
- B. Personal protective equipment contaminated by handling operations should be disposed of as contaminated waste.
- C. Hammering or sudden impact methods for removing ballast's from the light fixture shall not be employed as such methods may cause leakage in an otherwise non-leaking ballast.
- D. Care must be exercised when collecting other items – light bulbs, mercury thermostats and gauges, batteries, refrigerants, fuels, lubricants, and paints, so not to release or spill these products into the environment.
- E. Throwing and tossing of ballast's into disposal drums shall not be conducted, as such activities may cause leakage in otherwise non-leaking ballast.
- F. All removal and disposal activities shall be monitored by the Commissioner for compliance.

3.03 WORK PROCEDURES:

- A. The Contractor is to establish a EPA hazardous waste generator number as agent to the City of New York for the project. Non-hazardous materials shall be transported using non-hazardous waste manifests or appropriate bills of lading.
- B. During the light bulb removal, the following procedures (or equivalent alternate but protective measures) are to be followed:

1. Carefully remove tubes from fixtures and repackage them in appropriate cartons for transportation for recycling and/or disposal.
 2. Designate an area where the bulbs can be placed for storage.
 3. In the event a bulb breaks, utilize a mercury capture vacuum to remove all debris generated.
- C. Carefully remove light ballasts, and segregate for disposal in the following manner:
1. Given the age of the structure all ballasts are assumed to contain either poly chlorinated biphenyls (PCBs) or di-2-ethylhexyl phthalate (DEHP). PCBs were used in the manufacture of ballasts until 1979. All ballasts shall be assumed to contain PCBs.
 2. Non-leaking ballasts shall be segregated and drummed for disposal as a hazardous and TSCA waste. Disposal of PCB ballasts may be by:
 - a. Landfilled at a properly permitted TSCA landfill facility; and,
 - b. Whole ballast destruction via by high temperature incineration at an approved TSCA incinerator
- D. Leaking ballasts shall be segregated and drummed. Punctures or damage to these ballasts exposes an oily or tar-like substance. These ballasts, and all materials it contacts, including PPE MUST be incinerated under the TSCA regulations as they cannot be landfilled or recycled.
- E. During removing/recycling of stored chemical products, cleaners, paints, etc., enclosed in their original container, the Contractor shall place chemicals into properly OSHA labeled, airtight 55-gallon drums or into lab packs. In turn these drums/lab packs shall be transported, under proper manifesting procedures, to a recycling/disposal facility. The facility shall forward a certificate of recycling or disposal/destruction to the Contractor, who shall incorporate this information into the close out package to be provided to the Contraction Manager.
- F. Dielectric fluid present in the subbasement transformer shall be sampled and tested for the presence of PCBs. Upon characterization, the fluid shall be drained, containerized, labeled and shipped off-site for proper treatment and disposal. Disposal of the transformer shall be according to Toxic Substances Control Act (TSCA) regulations. Disposal of the transformer will be dictated by the concentration of PCBs in the liquid present within the transformer. PCB transformers must be disposed of in an incinerator that complies with Code of Federal Regulations (CFR) Part 761.70 or in a chemical waste landfill approved under section 761.75.
- G. Petroleum product found within the subbasement aboveground storage tank and any used oils and fuels associated with mechanical equipment in the building shall be

recovered whenever possible. Upon recovery, these materials shall be characterized for subsequent disposal.

- H. Drums can be stored for up to ninety (90) days from the initial date of waste generation, prior to disposal or destruction. All other removed materials shall be stored in the appropriate containers. A secure storage site shall be designated, labeled in accordance with the applicable rules and regulations, and be maintained by the Contractor. The waste storage area shall be inspected daily by the Contractor and the inspection shall be noted on a Waste Inspection Form developed by the Contractor.
- I. The Contractor shall coordinate all shipments and arrivals at the TSDF to meet project schedule requirements. The Contractor shall complete any required shipping papers, manifests, placarding, and weighing or load measurements and provide copies of all documentation to the Commissioner.
- J. The Contractor shall ensure that the trucks used to transport any materials during the project protect against contamination to the environment. This will be accomplished by using enclosed trucks, or by properly covering and, if applicable, lining the trucks with compatible material. The Contractor shall verify that any trucks used to transport liquids or solid materials are not leaking.
- K. The Contractor shall provide written weekly reports documenting the progress made, summarizing the upcoming work, and identifying any coordination issues with other groups. The weekly reports are to be submitted no later than 3:00 pm the Monday following the week that just ended.

3.04 WASTE DISPOSAL:

- A. Fluorescent fixtures are to be repackaged for recycling or disposed at an appropriate facility. Certificates of destruction are to be provided for lamps destroyed or recycled. Waste manifests are to be provided for lamps that are landfilled.
- B. Non-leaking PCB ballasts are to be either landfilled or destroyed by high-temperature incineration. Landfilled ballasts are to be properly manifested. Certificates of destruction must be provided for destroyed ballasts. Waste shipment records are to be provided for all materials transported from the Site.
- C. Leaking PCB ballasts (and any associated materials contaminated by such leakage) must be destroyed by high-temperature incineration. Certificates of destruction and waste transport/shipment records must be provided upon completion.
- D. Batteries and mercury containing gauges/levels/thermostats shall be disposed of under the Universal Waste Rule.
- E. PCB liquids at concentrations greater than 50 ppm shall be disposed of in an incinerator which complies with 40 CFR Section 761.70. If PCBs are present at a concentration of between 50 and 500 ppm, disposal via a high efficiency boiler may be substituted with

the City of New York's approval as an acceptable alternative. Liquids with a PCB concentration greater than 500ppm must be disposed of in an incinerator.

- F. All recovered petroleum products shall be shipped off-site for liquid fuels blending or another acceptable alternative approved by the City of New York for the treatment of these materials.
- G. All refrigerants must be properly tested and characterized for recycling/disposal.
- H. All other wastes are to be disposed of in accordance with all applicable Federal, State and Local regulations.

END OF SECTION

SECTION 02 84 33

REMOVAL OF PCB-BEARING MATERIALS

PART 1 - GENERAL

1.01 PCB-BEARING MATERIAL REMOVAL:

- A. This section covers the requirements for the removal and disposal of Polychlorinated Biphenyls (PCBs) and the handling of PCB containing materials per 40 CFR 761 - Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions of Polychlorinated Biphenyls (PCBs). This section is intended for use in areas where PCBs or materials containing PCBs have been identified. The Contractor's PCB-bearing material removal protocols must be provided in a Work Plan and approved by the Commissioner prior to initiating PCB work.

1.02 REQUIREMENTS:

- A. The work includes the removal and disposal of specified PCBs and PCB containing material. Perform work in accordance with 40 CFR Parts 750 and 761 and the requirements specified herein.

1.03 PROTECTION:

- A. PCB Control Area. Isolate PCB control area by physical boundaries to prevent unauthorized entry of personnel. Food, drink, and smoking materials shall not be permitted in areas where PCBs are handled or PCB items are stored.
- B. Personnel Protection. Workers shall wear and use PPE, as stated in the Contractor's HASP, upon entering a PCB control area.
- C. Footwear. Work footwear shall remain inside the work area until the completion of job.
- D. Permissible Exposure Limits (PEL). PEL for PCBs is 0.5 mg/m^3 on an 8-hour weighted average basis.
- E. Special Hazards
1. PCBs shall not be exposed to open flames or other high temperature sources since toxic decomposition by-products may be produced.
 2. PCBs shall not be heated to temperatures of 55°C (135°F) or higher without the Commissioner's approval.
- F. PCB Caution Label. Affix labels to PCB waste containers and other PCB-contaminated items. Provide label with sufficient print size to be clearly legible, with bold print on a contrasting background, displaying the following:

CAUTION: Contains PCBs (Polychlorinated Biphenyls)

- G. PCB Caution Sign. Provide signs at approaches to PCB control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area.

1.04 WORK PROCEDURE:

- A. Furnish labor, materials, services, and equipment necessary for the complete removal of PCBs located at the Site as indicated or specified in accordance with local, state, or federal regulations. Package and mark PCB as required by USEPA and DOT regulations.
- B. No Smoking. Smoking is not permitted within 50 feet of the PCB control area. Provide "No Smoking" signs as directed by the Commissioner.
- C. Work Operations. Ensure that work operations or processes involving PCB or PCB-contaminated materials are conducted in accordance with 40 CFR 761 and the applicable requirements of this section, including but not limited to:
 - 1. Obtaining advance approval of PCB storage sites.
 - 2. Notifying the Commissioner prior to commencing the operation.
 - 3. Reporting leaks and spills to the Commissioner.
 - 4. Decontamination of spills.
 - 5. Maintaining an access log of employees working in a PCB control area and providing a copy to the Commissioner upon completion of the decontamination.
 - 6. Inspecting PCB and PCB-contaminated items and waste containers for leaks and forwarding copies of inspection reports to the Commissioner.
 - 7. Maintaining inspection, inventory, and spill records.

1.05 PCB REMOVAL:

- A. Select PCB removal procedure to prevent contamination of work areas with PCB or other PCB-contaminated debris/waste. Handle PCBs such that no skin contact occurs. PCB removal process should be described in the Contractor's approved Project Work Plan.
- B. Confined Spaces. The Contractor shall adhere to all confined space procedures (29 CFR 1910.146) and ensure that workers are equipped with suitable PPE during PCB removal activities.
- C. Control Area. Establish a PCB control area around the PCB item as specified in paragraph entitled "PCB Control Area". Only authorized personnel shall be allowed into the area.

- D. Exhaust Ventilation. If used, exhaust ventilation for PCB operations shall discharge to the outside and away from personnel.
- E. Temperatures. Handle PCBs at ambient temperatures and not at elevated temperatures.
- F. Drip Pans. Drip pans are required under portable PCB transformers and rectifiers in use or stored for use. The pans shall have a containment volume of at least one and one-half times the internal volume of PCBs in the item.
- G. Evacuation Procedures. Procedures shall be written for evacuation of injured workers. Aid for a seriously injured worker shall not be delayed for reasons of decontamination.
- H. PCB Analysis. The Contractor shall be responsible to provide laboratory testing to determine the concentration of PCBs in all PCB oil-bearing equipment. The testing must be conducted by an accredited laboratory using USEPA-approved analytical method(s).

1.06 PCB TRANSFORMERS:

- A. Draining of Transformer Liquid. Perform work in accordance with applicable regulations and as specified herein. Drain the transformer, switches, and regulators of free flowing liquid prior to transportation. Place the drained liquids in DOT approved drums. The drums shall not contain more than 50 gallons of oil. If the equipment cannot be drained, then place it in applicable DOT approved drums.
- B. Markings. Provide drums and drained PCB-contaminated electrical equipment with caution label markings as specified in paragraph entitled "PCB Caution Label".
- C. Drums. Stencil on the DOT approved 55-gallon drums containing PCB liquid the following:
 - 1. PCB concentration (ppm)
 - 2. date drum filled
 - 3. serial number of transformer liquid came from

Do not mix different concentrations (ppms) in the same drum. Drums must have a 2-inch head space from the top of the drum.

1.07 PCB-CONTAINING CAPACITORS AND LIGHT BALLASTS:

- A. Drumming of Capacitors. All drumming of PCB-containing capacitors must comply with 29 CFR 761 including:
 - 1. Place several inches of absorbent material in the bottom of a clean, dry drum.
 - 2. Line the drum with heavy plastic.

3. Place non-leaking capacitors in prepared drum, properly labeling drum as to where and when capacitor was removed from service.
 4. If capacitors are too large to be placed in a 55-gallon DOT approved drum then capacitor shall be placed in a container with strength and durability equivalent to the DOT specification containers. The containers shall be filled with sufficient absorbent material to absorb any liquid PCBs remaining in the capacitors.
 5. Regulated capacitors must have a unique ID number for each regulated capacitor.
 6. Non-regulated capacitors must have a unique ID number per drum.
- B. Drumming of light ballasts. Remove PCB-contaminated ballasts from fluorescent light fixtures and dispose of as follows:
1. Assume light fixture ballasts contain PCBs unless marked by the manufacturer with the statement "No PCBs".
 2. Unmarked, non-leaking ballasts shall be removed from each light fixture and placed directly into a double thickness plastic bag. Leaking ballasts shall be wrapped in newspaper or other sorbent materials before placing into the plastic bag. For transporting, the bag shall be placed in a drum that is DOT approved Drum Type 17H for PCBs.

1.08 PCB SPILL DECONTAMINATION REQUIREMENTS:

- A. PCB Spills. Immediately report to Commissioner and appropriate agencies (NYSDEC and USEPA) any new PCB spills on the ground or in the water, PCB spills in drip pans, or PCB leaks.
- B. PCB Spill Control Area. Rope off an area around the edges of a PCB leak or spill and post a "PCB Spill Authorized Personnel Only" caution sign. Immediately transfer leaking items to a drip pan or other container.
- C. PCB Spill Decontamination. Initiate decontamination of spills as soon as possible, but no later than within 24 hours of its discovery. To decontaminate spills, personnel shall wear the appropriate PPE as specified in the Contractor's HASP. If misting, elevated temperatures or open flames are present, or if the spill is situated in a confined space, notify the Commissioner. Mop up the liquid with rags or other conventional absorbent. The spent absorbent shall be properly contained and disposed of as solid PCB waste.
- D. Spills and all contaminated materials used for clean up shall be disposed of according to Environmental Protection Agency (USEPA) requirements (Toxic Substance Control Act, 40 CFR, Part 761).
- E. Sampling Requirements. The Contractor shall perform post decontamination sampling as required by 40 CFR 761, Section 130, Sampling Requirements. Do not remove boundaries of the PCB control area until the Site is determined satisfactorily clean by the Commissioner.

1.09 STORAGE FOR DISPOSAL:

- A. All storage of waste shall be done at the direction of the Commissioner. All storage of waste PCBs shall be in accordance with 40 CFR 761.65. The handling and storage of waste PCBs shall be modified if state or local requirements are more stringent. In addition, PCB storage shall meet the following:
1. Storage Containers for PCBs. The collection of PCBs shall be in Department of Transportation approved containers. As a minimum, closed head containers shall be used for liquids.
 2. Waste Containers. Label with the following:
 - a. "Solid [or Liquid] Waste Polychlorinated Biphenyls"
 - b. The PCB Caution Label, paragraph entitled "PCB Caution Label"
 - c. The date the item was placed in storage and the name of the cognizant activity/building.
 3. Approval of Storage Site. Obtain approval in advance from the Commissioner for use of either an existing hazardous waste storage area or an area which can be modified to meet the following requirements. As a minimum, all PCB storage areas shall meet 40 CFR 761.65 requirements, including:
 - a. Adequate roof and walls prevent rainwater from reaching the stored PCBs.
 - b. An adequate floor is in place which has continuous curbing with a minimum 6-inch high curb. Such floor and curbing shall provide a containment volume equal to at least two times the internal volume of the largest PCB article or PCB container stored therein or 25 percent of the total internal volume of all PCB equipment or containers stored therein, whichever is greater.
 - c. No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area.
 - d. Floors and curbing are constructed of continuous smooth and impervious materials such as portland cement, concrete or steel to prevent or minimize penetrations of PCBs.
 - e. Each storage site shall be posted with the PCB Caution Sign, in accordance with the paragraph entitled "PCB Caution Sign".
 - f. The storage area shall be inspected weekly. Any signs of spills, leaks, or

potential problems shall be corrected immediately. All inspections, corrections, and actions shall be documented in writing.

- g. Drums are to be stored to allow adequate space on each side to allow inspection.
- h. Drums shall be sealed and marked with an approved USEPA label, transported to an USEPA approved disposal site by a licensed hazardous waste transporter, and disposed of in accordance with 40 CFR Part 761. Complete paperwork shall be maintained by the Contractor to verify proper disposal.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 DRAINING:

- A. Drain, collect and remove all internal fluids from each equipment. Internal fluids from similar equipment shall be drained into one container provided that dilution does not occur. The use of torches or cutting equipment for disassembly shall only be allowed when mechanical disassembly of transformers is impractical, as determined by the Commissioner.

3.02 PCB ANALYSIS:

- A. Collect one sample from each equipment internal fluids. Collect one sample of internal fluids from similar equipment that were drained in one container. Analyze for PCBs using NYSDEC ASP Method 8080. The Contractor shall review the analytical results and propose the disposal method for the internal fluids.

3.03 DISPOSAL OF WASTES:

- A. Handle and dispose of capacitors, light ballasts, equipment, internal fluids and spent rinsing agents as PCB wastes. Dispose of the collected internal fluids and rinsing agents in a TSCA-regulated licensed facility for PCB concentrations greater than or equal to 50 mg/kg. Dispose of the collected internal fluids and rinsing agents in a licensed facility for PCB concentrations less than 50 mg/kg.

3.04 QUALIFICATIONS:

- A. The Contractor and Subcontractors involved in any activity which may impact upon PCB containing equipment or materials (i.e., electrical equipment, capacitors, or light ballasts) shall have demonstrated two years of experience in PCB assessment and management, environmental and personal monitoring, worker protection and training, and PCB remediation.

- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met for the Contractor or his subcontractor or subconsultant.

END OF SECTION

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SECTION 02 86 00

REMOVAL OF DRUMMED WASTE AND DECONTAMINATION WATER

PART 1 - GENERAL

1.01 SCOPE:

- A. The work covered by this specification includes the transport and disposal of drummed waste located throughout the project area, and decontamination wash water generated by the washing of equipment and the interior of the building. The work shall require the submittal of a Work Plan specifying the material testing, removal, and disposal methods and requirements. All work shall be conducted in accordance with all applicable Federal, State and local regulations and the provisions of this and accompanying specifications. The Contractor shall remove all decontamination water from the site and dispose of it at a NYSDEC approved and permitted facility in accordance with this Section. Alternatively, collected water can be treated onsite in accordance with Section 02 71 00 – Water Treatment System to achieve New York City Department of Environmental Protection (NYCDEP) discharge parameters prior to discharge to the sewer, using appropriate parameters for sanitary, storm, or combined systems.

1.02 REFERENCES:

- A. The publications listed below are incorporated into this specification and shall be read as if printed herein. In the case of conflict between the referenced documents and the following text, the stricter requirements shall apply.

1. CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 260 - 270 USEPA's Hazardous Waste Requirements

40 CFR 136 Guideline for Establishing Test Procedures for Analysis of Pollutants

2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 30 Flammable and Combustible Liquids Codes

3. U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA)

USEPA-SW-846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Third Edition. November 1986

USEPA Standard Operating Guide. July 1988

4. MANIFESTING AND TRANSPORTING (DOT)

49 CFR

Hazardous Materials Transportation Regulations

1.03 CONTRACTOR SERVICES:

- A. The Contractor shall furnish all materials, labor, tools, equipment, utilities, water, fuel, transportation, field log preparation, and necessary incidental services for:
1. Over-packing and/or pumping and removal of hazardous wastes and petroleum wastes/products;
 2. Transport of all wastes/products;
 3. Field sampling for waste characterization;
 4. Transport and disposal of all cleaning wastes;
 5. All necessary incidental services not specifically noted but which are required for completion of the specified work; and,
 6. Environmental reporting. This includes submittal of the following items and their subparts described herein:
 - a. Proof of qualification credentials;
 - b. Copies of transport and disposal manifests;
 - c. Waste Record Field Report;
 - d. Logs, reports and record keeping, as required by the Commissioner
 - e. Bills of lading, Certified Weight Tickets

1.04 REGULATORY REQUIREMENTS:

- A. All work included in this contract shall be conducted in strict compliance with all applicable Federal, State and Local regulations, statutes, codes and policies.

1.05 CONTAMINANTS:

- A. Available drum sampling results shall be furnished to the Contractor. Decontamination wash waters may become contaminated with hazardous or dangerous wastes and/or petroleum products. Hazardous or dangerous contaminants which may be found include petroleum products, chlorinated solvents, PCBs, lead, cadmium and mercury. The Contractor shall be required to work with any materials as necessary and at all levels of OSHA mandated personal protection.

1.06 PERMITS AND CERTIFICATIONS:

- A. The Contractor shall be responsible for obtaining all of the necessary Federal, State and Local permits required for waste, removal, transport, and disposal. The Contractor or Contractor's subconsultant/subcontractor must submit a Drummed Waste and Decontamination Water Management Work Plan. In the event that an USEPA/State Hazardous Waste Site Identification Number is required for soil transport and disposal, the City of New York shall be responsible for obtaining the identification number and the Contractor shall be responsible for obtaining the transportation manifest.

1.07 SUPERVISION:

- A. The Contractor shall assign a foreman to be directly responsible for coordinating and directing all work required for the operations.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 REMOVAL OF CONTAMINATED WASH WATER AND ALL DRUMMED PRODUCTS AND WASTES:

- A. Removal and Transport of Contaminated Wash Water and Drummed Products/Wastes. The Contractor shall remove and transport all such material as necessary.
- B. Security of Materials during Transport. The Contractor shall ensure that all materials are secured during transport. The Contractor shall address this issue as part of the Project Work Plan.
- C. Transport Manifests, Bills of Lading, Certified Weight Tickets. The Contractor shall obtain and submit two (2) copies of all transport manifests, bills of lading, and certified weight tickets for recycling and/or disposal of all materials to the Commissioner within 3 calendar days of transport of any material. All other materials shall be transported for recycling. Landfilling of any material is not an acceptable disposal method except as a last resort as determined by the Commissioner. Receipts shall indicate at a minimum the following information: date, time, driver, remediation or recycling facility, quantity and type of material delivered, remediation method, RCRA facility permit number, as appropriate, and roundtrip travel mileage from the work Site to the facility.
- D. Treatment and Disposal of Wastes and Water. Contaminated water and products/wastes, shall be treated and disposed of in an environmentally safe and responsible manner in accordance with all applicable Federal, State or Local requirements. If the water to be treated is a Federal, State or Local hazardous or dangerous waste, the Contractor shall coordinate with the Commissioner for any special disposal and transportation requirements. The Contractor shall utilize either a RCRA permitted disposal facility or other permitted treatment facility to dispose of petroleum and water. Contaminated waste shall not be disposed of on-site. Final water/waste deposition at a RCRA permitted facility must be documented and presented in the final Field Report. All

chain of custody information, including quantity delivered, facility location and phone number, and the method of disposal must be included.

- E. Staging of Drummed/Contained Water and Wastes during Construction. The Contractor shall ensure during all stages of field work that contaminated water and wastes are properly isolated from the surrounding environment to prevent contamination migration. The Contractor shall at no time leave drummed or contained materials unsecured or unattended. All drummed or containerized wastes shall be staged prior to disposal in accordance with all applicable regulations.
- F. Plastic or Polyethylene Liner. All staged wastes shall be secured against contamination migration due to wind, rain, etc. through the use of polyethylene liners (10 mil minimum thickness). If more than one continuous piece of plastic is used for the liner or cover, it shall be sealed at the edges with an appropriate sealer (duct tape, etc.). The liner shall be sufficiently larger than the area of stored soil to cover the stored waste.
- G. Removal, Transport and Disposal of Waste Containment Structures. The Contractor shall be responsible for all work associated with removal, transport and disposal and/or final deposition of waste containment structures.

3.02 REMOVAL, TREATMENT AND DISPOSAL OF MATERIALS:

- A. Field sampling of contaminated wash water and drummed waste shall be performed by the Contractor prior to removal and disposal. The Contractor shall be responsible for transporting, treating, and disposing of any contaminated and uncontaminated water/wastes, as required in accordance with the technical specification described herein. The Contractor shall not dispose of water/wastes without the express written direction of the Commissioner.
- B. Security of Staged Wastes. The Contractor shall place chain-link security fencing around any staged water/waste which is left unattended by the Contractor or unsecured within the building. The chain-link fence shall be fabricated of 9-gauge zinc or aluminum coated steel wire woven in 2-inch mesh and shall not be less than six (6) feet in height, and shall be capable of withstanding a minimum lateral force of 200 lbs.
- C. Staging of Contaminated Materials. Long term staging of water and wastes prior to transport, treatment, and disposal shall not be permitted. The Contractor shall comply with all applicable local, state and federal waste storage regulations. The Contractor shall transport water and wastes as removed or generated unless otherwise directed by the Commissioner.

3.03 LOGS, REPORTS, AND RECORD KEEPING:

- A. The following logs, reports, and records shall be developed, retained, and submitted to the Commissioner and/or entitled regulatory agencies upon request (unless otherwise noted in previous sections):
 - 1. Training logs including employees' Printed names and signatures in addition to training

subject and date or copy of applicable training certificate;

2. Daily safety inspection logs;
 3. Employee/visitor/register;
 4. Medical opinions/certifications;
 5. Environmental and personal exposure monitoring records;
 6. Phase-out reports (final documentation verification certificates, transport and disposal manifests, final medical certificates, etc.); and,
 7. A copy of all State licensing certificates required to transport and receive wastes.
- B. All personnel exposure and medical monitoring records shall be maintained in accordance with applicable OSHA standards, 29 CFR 1910 and 1926 (including OSHA 200 log and accident/first aid reports).

3.04 QUALIFICATIONS:

- A. The Contractor and Subcontractors involved in any activity which is involved with the clean-up, handling, transport, or disposal of drummed waste, decontamination water shall have demonstrated two years of experience in waste hazard assessment and management, environmental and personal air monitoring, worker protection and training, and petroleum and hazardous materials remediation.
- B. The Contractor shall provide demonstration that the minimum insurance criteria have been met for the Contractor or his subcontractor or subconsultant.

END OF SECTION

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SECTION 03 31 29

MARINE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Work of this Section includes all labor, materials, equipment, and services necessary to provide new cast-in-place marine concrete for waterfront structures as shown on the Contract Drawings and/or specified herein, including, but not necessarily limited to, the following in work phases and sequences indicated:
 - 1. Concrete, Reinforcement, and Formwork.
 - 2. Sleeves for conduits, piping, and other construction as indicated.
 - 3. Concrete reinforced structural elements.
 - 4. Pier deck topping slab.
 - 5. Accessory materials and installation for cast-in-place concrete work.
- B. This Section also includes provisions for concrete work as referenced by other Sections including marine concrete mix design; cement, water, aggregate, and admixture materials; and other provisions related to providing concrete for production of precast and precast prestressed structural concrete units.
- C. At Contractor's option, concrete pile caps and/or curb beams of waterfront structures Project may be constructed of precast concrete or cast-in-place concrete as approved by Commissioner. Constructed pile cap and edge beam elements of structure(s) shall comply with Contract Drawing details and specification requirements of indicated design criteria for elements and the Contract Documents.
- D. Related Sections include the following:
 - 1. General Conditions "Quality Requirements".
 - 2. General Conditions "Execution Requirements" for additional field surveying provisions including requirements for a field survey of existing previously installed Pier 97 concrete pile locations and elevations.
 - 3. Division 3 Section 034100 "Precast and Precast Prestressed Structural Concrete" for precast pile caps (as option), deck planking, and other precast elements.

1.3 DEFINITIONS

- A. "Blending size" is an aggregate that complies with the quality requirements in ASTM C33 and paragraph entitled "Aggregates" and as modified herein and can be blended with coarse and fine aggregate to produce a well graded combined grading.
- B. "Cementitious material" as used herein shall include Portland cement, pozzolan, fly ash, ground granulated blast-furnace slag.
- C. "Design strength" (f'_c) is the specified compressive strength of concrete to meet structural design criteria.
- D. "Marine concrete" is that concrete that will be in contact with or subject to submersion, tidal variations, splash, or spray from water in navigable waterways.
- E. "Mixture proportioning" is a description of the proportions of a concrete mixture that were selected to enable it to meet the performance durability requirements, constructability requirements, and the initial and life cycle cost goals.
- F. "Mixture proportions" is the concrete supplier's by-mass proportions to replicate the mixture design.
- G. "Pozzolan" is a silicious or silicious and aluminous material, which in itself possesses little or no cementitious value but will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cementitious properties.
- H. "Field test strength" (f_{cr}) is the required compressive strength of concrete to meet structural and durability criteria. Determine (f_{cr}) during mixture proportioning process.

1.4 DESIGN AND PERFORMANCE REQUIREMENTS

- A. Concrete Mixture Design:
 - 1. Prior to concrete placement and at a time approved by Construction Manager, submit proportions for a concrete mixture of each strength and type of concrete required for Project. Include the following in addition to requirements specified elsewhere in this Section:
 - a. Submit a complete list of materials including type; brand; source and amount of cement, aggregate, fly ash, (or slag pozzolans), ground slag, corrosion inhibitors, and other admixtures for pre-cast concrete work; and applicable reference specifications.
 - b. Submittals shall clearly indicate where each mixture will be used when more than one concrete mix design is submitted.

- c. Submit additional data regarding concrete aggregates if the source of aggregate changes.
 - d. An identical concrete mixture meeting the requirements herein and previously approved within the past 12 months by the Commissioner, may be used without further approval, if copies of the previous approval and aggregate, fly ash, silica fume, and pozzolan test results are submitted. The approval of aggregate, fly ash, and pozzolan tests results shall have been within 6 months of submittal date. Obtain acknowledgement of receipt prior to concrete placement.
 2. The concrete mix design(s) shall be prepared by an accredited laboratory experienced in this field and under the direction of the Contractor's Professional Engineer, who shall sign all reports and designs. Refer to General Conditions "Quality Requirements" and additional requirements of this Section.
- B. Formwork Design: Contractor shall be responsible for the proper design, bracing, shoring, and construction of all formwork for Project conditions and shall retain a Licensed Professional Engineer to design such formwork, bracing, and shoring in accordance with the requirements of the NYC Building Code.
- C. Joint Construction: Joint sizes indicated between concrete elements and between concrete elements and other adjacent construction are based on joint conditions at a design temperature of 70 degrees F. Joint construction at other temperatures shall be adjusted in size to suit on-site temperature conditions at time of installation as approved by Commissioner.

1.5 SUBMITTALS

- A. General: Refer to and comply with General Conditions "Submittals Procedures", for procedures and additional submittal criteria.
 1. If, at Contractor's option, concrete pile caps and/or curb beams are proposed to be constructed of precast concrete in lieu of cast-in-place concrete, comply with requirements for submittals, quality assurance, fabrication, and Execution as specified in Division 3 Section 034100 "Precast and Precast Prestressed Structural Concrete" in addition to applicable requirements of this Section as approved by Commissioner.
- B. Qualification Submittals:
 1. Coordinate with provisions specified in General Conditions "Execution Requirements".
 2. Contractor's Surveyor: Submit qualifications of the Contractor's Surveyor to adequately survey all sleeves for conduits, deck openings, and anchor bolts for future work.

C. Product Data:

1. Concrete materials and ingredients related to products used in concrete mix design(s) and submittal requirements for Test Reports specified herein.
2. Fiber reinforcement material (for topping slab only).
3. Form materials of each type to be used for exposed concrete and special forming conditions.
4. Reinforcing with epoxy coatings.
5. Reinforcement supports.
6. Joint sealants.
7. Joint filler.
8. Epoxy bonding compound.
9. Epoxy coatings.
10. Non-shrink grout.
11. Preformed joint filler and sealer.
12. Materials for curing concrete.

D. Shop Drawings: Prepare and submit shop drawings for approval, including plans, elevations, sections, details and schedules as required to fully illustrate details of work and to meet job conditions. Reproductions of Contract Drawings are unacceptable as shop drawings. Marked copies of the Contract Drawings will not be accepted as placing drawings.

1. General Requirements: Dimensions for concrete work shall be confirmed and correlated at the job site. Shop drawings and other submittals shall include fabrication processes, techniques of construction, relationship of concrete work with embedded or built-in items, and relationship to adjacent construction.
 - a. After stake layout of on-site conditions, confirm locations of on-site elements together with Construction Manager and revise layout of reinforcing steel and form-work drawings as necessary to reflect adjustments.
2. Reinforcing Steel: Comply with ACI 315. Submit bending and cutting diagrams, assembly diagrams, splicing placement and laps of bars, shapes, dimensions, and details of bar reinforcing, accessories, and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars. Only complete shop drawings will be accepted.
3. Formwork: Comply with ACI 347R. Include design calculations indicating arrangement of forms, sizes and grades of supports (lumber), panels, and related components. Indicate placement schedule, construction, and location and method of forming control joints.
 - a. Include locations of inserts, pipe work, conduit, sleeves, and other embedded items.
 - b. Include recesses, depressions, pockets, block outs, penetrations and provisions for future utilities or other elements to be installed.
 - c. Furnish drawings and descriptions of shoring and re-shoring methods proposed for slabs, beams, and other horizontal concrete members.

4. Construction Joints: Show locations of construction joints and crack control joints.
5. Finishing: Show finished dimensions and surface finishes for each element and condition.

E. Quality Control Submittals:

1. Design Data:

a. Concrete Mixture Design(s):

- 1) Prepare and submit a detailed report of materials and methods used, test results, and the field test strength (f_{cr}) for marine concrete required to meet durability requirements.
- 2) Mix design(s) shall be signed and sealed by a Contractor's Professional Engineer licensed in the State of New York and shall include time/strength curves for the various mix designs and the recommended design.

2. Test Reports:

a. Concrete Mixture Proportions:

- 1) Submit copies of test reports by independent test labs conforming to ASTM C1077 showing that the mixture has been successfully tested to produce concrete with the properties specified and that mixture will be suitable for the job conditions. Test reports shall be submitted along with the concrete mixture proportions. Obtain approval before concrete placement.
- 2) Fully describe the processes and methodology whereby mixture proportions were developed and tested and how proportions will be adjusted during progress of the work to achieve, as closely as possible, the designated levels of relevant properties.

b. Fly Ash and Natural Pozzolan: Submit test results in accordance with ASTM C618. Submit test results performed within 6 months of submittal date.

c. Ground Iron Blast-Furnace Slag: Submit test results in accordance with ASTM C989 for ground iron blast-furnace slag. Submit test results performed within 6 months of submittal date.

d. Aggregates: Submit test results for aggregate quality in accordance with ASTM C33, and the combined gradation curve for grading proposed for use in the work and used in the mixture qualification, and ASTM C295 for results of petrographic examination. Where there is potential for alkali-silica reaction, provide results of tests conducted in accordance with ASTM C227 or ASTM C1260. Submit results of all tests during progress of the work in tabular and graphical form as noted above, describing the cumulative combined aggregate grading and the percent of the combined aggregate retained on each sieve.

e. Admixtures: Submit test results in accordance with ASTM C494 and ASTM C1017 for concrete admixtures, ASTM C260 for air-entraining agent, and

- manufacturer's literature and test reports for corrosion inhibitor and anti-washout admixture. Submitted data shall be based upon tests performed within 6 months of submittal.
- f. Cement: Submit test results in accordance with ASTM C150 Portland Cement and/or ASTM C595 and ASTM C1157 for blended cement. Submit current mill data.
 - g. Water: Submit test results in accordance with ASTM D512 and ASTM D516.
 - h. Reinforcement and Protective Coating: Provide coating manufacturer's and coating applicator's test data sheets certifying that applied coating meets the requirements of ASTM A775/A775M.
3. Certificates:
 - a. Mill certificates for reinforcing steel.
 4. Procedures and Work Plans for Quality Control:
 - a. General: Develop and submit for approval a quality control plan in accordance with the guidelines of ACI 121R and as specified herein. The plan shall include plans for the concrete supplier, the reinforcing steel supplier, and concrete installer. Maintain a copy of ACI SP-15 and CRSI Manual of Practice at the Project site.
 5. Concrete Placement and Compaction:
 - a. Submit technical literature for equipment and methods proposed for use in placing concrete. Include pumping or conveying equipment including type, size and material for pipe, valve characteristics, and the maximum length and height concrete will be pumped. No adjustments shall be made to the mixture design to facilitate pumping.
 - b. Submit technical literature for equipment and methods proposed for vibrating and compacting concrete. Submittal shall include technical literature describing the equipment including vibrator diameter, length, frequency, amplitude, centrifugal force, and manufacturer's description of the radius of influence under load. Where flat work is to be cast, provide similar information relative to the proposed compacting screed or other method to ensure dense placement.
 6. Curing Concrete Elements: Submit proposed materials and methods for curing concrete elements.
 7. Form Removal Schedule: Submit schedule for form removal indicating element and minimum length of time for form removal. Submit technical literature of forming material or liner, form release agent, form ties, and gasketing to prevent leakage at form and construction joints. Provide a full description of materials and methods to be used to patch form-tie holes.
- F. Samples for Verification:
1. Joint Materials, Each Type: Representative size/profile, 12" long.
- G. Field Sample for Evaluation of Mix Design: Provide Cast-in-Place Concrete slab and wall as

specified in Part 3 Article "Field Quality Control" herein.

1.6 REFERENCE AND STANDARDS

A. Publications listed below form a part of this specification Section to the extent referenced. Publications are referred to in the text by the basic designation only.

1. American Association of State Highway and Transportation Officials

(AASHTO): AASHTO M 182 Burlap Cloth Made From Jute or Kenaf

2. American Concrete Institute International (ACI):

ACI 117	Tolerances for Concrete Construction and Materials	ACI 121R
	Quality Assurance Systems for Concrete Construction	ACI 201.2R
	Durable Concrete	
ACI 211.1	Selecting Proportions for Normal, Heavyweight, and Mass Concrete	
ACI 214	Evaluation of Strength Test Results of Concrete	
ACI 301	Structural Concrete	
ACI 304R	Measuring, Mixing, Transporting, and Placing Concrete	
ACI 304.2R	Placing Concrete by Pumping Methods	
ACI 305R	Hot Weather Concreting	ACI 306.1 Cold Weather Concreting
ACI 308	Curing Concrete	
ACI 309R	Consolidation of Concrete	
ACI 311.1R	ACI Manual of Concrete Inspection	
ACI 315	Details and Detailing of Concrete Reinforcement	ACI 318/318M
	Building Code Requirements for Structural Concrete	ACI 347R
	Formwork for Concrete	
ACI SP-2	ACI Manual of Concrete Inspection	
ACI SP-15	Structural Concrete for Buildings	

3. American Society For Testing And Materials (ASTM):

ASTM A53	Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless	
ASTM A82	Steel Wire, Plain, for Concrete Reinforcement	
ASTM A185	Steel Welded Wire Fabric, Plain, for Concrete Reinforcement	
ASTM A496	Steel Wire, Deformed, for Concrete Reinforcement	
ASTM A497	Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement	
ASTM A615/A615M	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement	
ASTM A706/A706M	Low-Alloy Steel Deformed Bars for Concrete Reinforcement	
ASTM A775/A775M	Epoxy-Coated Steel Reinforcing Bars	
ASTM A884/A884M	Epoxy-Coated Steel Wire and Welded Wire Fabric for Reinforcement	

ASTM C31/C31M	Making and Curing Concrete Test Specimens in the Field
ASTM C33	Concrete Aggregates
ASTM C39	Compressive Strength of Cylindrical Concrete Specimens
ASTM C42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
ASTM C94	Ready-Mixed Concrete
ASTM C138	Unit Weight, Yield, and Air Content (Gravimetric) of Concrete
ASTM C143	Slump of Hydraulic Cement Concrete
ASTM C150	Portland Cement
ASTM C171	Sheet Materials for Curing Concrete
ASTM C172	Sampling Freshly Mixed Concrete
ASTM C173	Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C227	Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar method)
ASTM C231	Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Air-Entraining Admixtures for Concrete
ASTM C295	Petrographic Examination of Aggregates for Concrete
ASTM C309	Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C441	Effectiveness of Mineral Admixtures or Ground Blast-Furnace Slag in Preventing Excessive Expansion of Concrete Due to Alkali-Silica Reaction
ASTM C469	Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression
ASTM C494	Chemical Admixtures for Concrete
ASTM C496	Splitting Tensile Strength of Cylindrical Concrete Specimens
ASTM C595	Blended Hydraulic Cements
ASTM C597	Pulse Velocity through Concrete
ASTM C618	Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C642	Density Gravity, Absorption, and Voids in Hardened Concrete
ASTM C805	Rebound Number of Hardened Concrete
ASTM C881	Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C920	Elastomeric Joint Sealants
ASTM C989	Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
ASTM C1017	Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Temperature of Freshly Mixed Portland Cement Concrete
ASTM C1077	Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
ASTM C1107	Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
ASTM C1157	Blended Hydraulic Cement
ASTM C1202	Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration
ASTM C1218/C1218M	Water-Soluble Chloride in Mortar and Concrete
ASTM C1260	Potential Alkali Reactivity of Aggregates (Mortar-Bar)

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|------------|-------------------|--|
| ASTM D516 | Method) ASTM D512 | Chloride Ion in Water |
| ASTM D1179 | | Sulfate Ion in Water |
| ASTM D1190 | | Fluoride Ion in Water |
| ASTM D1339 | | Concrete Joint Sealer, Hot-Applied Elastic Type |
| ASTM D1751 | | Sulfite in Water |
| ASTM D1752 | | Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types) |
| ASTM D1785 | | Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction |
| ASTM D3867 | | Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120 |
| ASTM E329 | | Nitrite-Nitrate in Water |
4. Concrete Reinforcing Steel Institute (CRSI):
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| CRSI MSP | Manual of Standard Practice |
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5. The Engineered Wood Association (formally The American Plywood Association – APA):
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| APA PS 1 | Construction and Industrial Plywood |
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6. New York State Department of Transportation (NYSDOT): NYSDOT SS
- Standard Specifications
7. U.S. Army Corps of Engineers (USACOE):
- | | |
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| COE CRD-C 61 | Determining the Resistance of Freshly Mixed Concrete to Washing Out in Water |
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1.8 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver or mix concrete until forms, reinforcement, embedded items, and chamfer strips are in place and ready for concrete placement.
1. Conform to ACI 301 and ASTM A775/A775M for job site storage of materials.
 2. Store reinforcement of different sizes and shapes in separate piles or racks raised above the ground.
 3. Protect materials from contaminants such as grease, oil, and dirt.
 4. Ensure materials can be accurately identified after bundles are broken and tags removed.
- B. Comply with additional requirements in Part 3 Article "Placing Reinforcement and Miscellaneous Materials" herein.

PART 2 - PRODUCTS

2.1 CONCRETE QUALITY AND PROPORTIONING

- A. Durability and Strength: Comply with ACI 201.2R and ACI 211.1. Adjust the concrete 28-day design strength to produce concrete of minimum design strength (f'_c) for each condition as follows:
1. 5,000 psi for cast-in-place concrete.
 2. 5,000 psi for precast/prestressed concrete deck planks.
 3. 8,000 psi for precast/prestressed concrete piles.
- B. Contractor-Furnished Mixture Proportions:
1. General: All tests specified herein shall be performed with the proposed production mix except testing for chloride ion penetration shall be tested without corrosion inhibitor as specified below.
 2. Strength and Water-Cementitious Materials Ratio: Strength requirements shall be based on 28- day compressive strength determined on 6 by 12 inch cylindrical specimens in accordance with ASTM C39. The specified compressive strength of the concrete (f'_c) for each portion of the structure shall meet the requirements in the Contract Documents.
 3. Mixture proportions for marine concrete shall be developed by the Contractor to produce the design strength (f'_c) and to provide durability, workability, and mixture consistency to facilitate placement, compaction into the forms and around reinforcement without segregation or bleeding. Requirements for durability consideration specified in Table 1 and subparagraph entitled "Chloride Ion Penetration" in this Article shall be incorporated in the mixture proportions.

Table 1 - Concrete Quality Requirements

Maximum water/cement ratio:	0.40
Minimum quantity of cementitious material:	675 lbs/CY
Minimum quantity of Portland cement:	505 lbs/CY

In measuring the water/cement ratio, the water content considered shall include the water content of all liquid admixtures.

4. Maximum mass of fly ash, natural pozzolans or ground granulated blast-furnace slag that is included in the calculation of water-to-cementitious materials ratio shall not exceed the following limits:
 - a. Fly ash shall not be used for more than 25 percent by mass of the cementitious material. The fly ash and other pozzolans present in a Type IP or IPM blended cement, ASTM C595, shall be included in the calculated percentage. If fly ash or other pozzolan is used in concrete with slag, the Portland cement shall not be less than 50 percent of the total mass of cementitious materials. A higher percentage of fly ash may be used if tests are made using actual job materials to ascertain the early and later age strengths and durability performance specified,

- and the use is approved by the Commissioner.
- b. Weight of ground granulated blast-furnace slag conforming to ASTM C989 shall not exceed 50 percent of the weight of cement. The slag used in manufacture of a Type IS or ISM blended hydraulic cement conforming to ASTM C595 shall be included in the calculated percentage. Higher percentage of ground granulated blast-furnace slag may be used if tests are made using actual job materials to ascertain the early and later age strengths and durability performance specified, and the use is approved by Commissioner.
 - c. Minimum amount of Portland cement is 50 percent of the total mass of cementitious material.
5. Air Content: Concrete shall be air entrained and shall conform to the air limits specified herein.
 6. Slump: Concrete mixture shall be proportioned to have, at the point of deposit, a maximum slump of 4 inches as determined by ASTM C143. Where an ASTM C494, Type F or G admixture is used, the slump after the addition of the admixture shall be no less than 6 inches nor greater than 8 inches. Slump tolerances shall comply with the requirements of ACI 117.
 7. Chloride Ion Penetration: To ensure the durability of concrete in marine environment, concrete shall be proportioned to have the chloride ion penetration test in accordance with ASTM C1202, and be below 750 coulombs for concrete specimens tested at 28 days. This test is required for the mix design approval only and may be performed without the corrosion inhibitor added to the mix, but mix content shall be adjusted to achieve the specified water cement ratio without the liquid content of the missing corrosion inhibitor.
 8. Fiber Reinforcement (For Topping Slab Concrete Only). Provide fiber (nylon type) reinforcement material at a dosage rate of 1.5 pounds per cubic yard of concrete.
- C. Required Average Strength of Concrete: Minimum compressive strength (f_{cr}) of the selected mixture shall equal or exceed the strength required under ACI 301 for laboratory mixture designs and which passes the test indicated in the subparagraph entitled "Chloride Ion Penetration" in this Article. The average compressive strength produced under field tests shall be the minimum compressive strength (f_{cr}) required during construction.
- D. The contractor shall be responsible for, and bear all costs associated with the filing and securing of approvals, if any, for Form TR3: Technical Report Concrete Design Mix, including, but not limited to, engaging the services of a New York City licensed Concrete Testing Lab for the review and approval of concrete design mix, testing, signatures and professional seals, etc., compliant with NYC Department of Buildings requirements, for each concrete design mix.

2.2 MATERIALS

- A. Cement: Comply with ASTM C150, Type II and/or ASTM C595, Type IP(MS) or IS(MS) blended cement except as modified herein. The tricalcium aluminate (C_3A) content shall not be less than 4 percent to provide protection for the reinforcement and shall not be more than 10 percent to obtain concrete that is resistant to sulfate attack. Blended cements shall

consist of a mixture of ASTM C150 cement and one of the following materials: ASTM C618 pozzolan or fly ash, or ASTM C989 ground granulated blast-furnace slag. Use one manufacturer for each type of cement, ground slag, fly ash, and pozzolan.

1. Fly Ash and Pozzolan: Comply with ASTM C618, Type N, F, or C, except that the maximum allowable loss on ignition shall be 6 percent for Types N and F. Add with cement.
 2. Ground Iron Blast-Furnace Slag: Comply with ASTM C989, Grade 120.
- B. Water: Water shall be potable and shall comply with the requirements of ASTM C94 and the chloride and sulfate limits in accordance with ASTM D512 and ASTM D516. Mixing water shall not contain more than 500 parts per million of chlorides as Cl and not more than 100 parts per million of sulfates as SO₄. Water shall be free from injurious amounts of oils, acids, alkalies, salts, and organic materials. Where water from reprocessed concrete is proposed for use in the work, submit results of tests to verify that the treatment has negated adverse effects of deleterious materials.
- C. Aggregates: Comply with ASTM C33, except as modified herein.
1. The combined aggregates in the mixture (coarse, fine, and blending sizes) shall be well graded from the coarsest to the finest with not more than 18 percent nor less than 8 percent, unless otherwise permitted, of the combined aggregate retained on any individual sieve with the exceptions that the No. 50 may have less than 8 percent retained, sieves finer than No. 50 shall have less than 8 percent retained, and the coarsest sieve may have less than 8 percent retained. Use blending sizes where necessary, to provide a well graded combined aggregate. Maximum aggregate size shall be one (1) inch. Reports of individual aggregates shall include standard concrete aggregate sieve sizes including one inch, ¾ inch, ½ inch, 3/8 inch, No. 4, No. 8, No. 16, No. 30, No. 50, and No. 100.
 2. Provide aggregates for exposed concrete from one source, ASTM C227. Do not provide aggregates that react deleteriously with alkalies in cement. Refer to appendix, paragraph entitled "Test Method C227" of ASTM C33 for expansion limits. Provide aggregate containing no deleterious material properties as identified by ASTM C295.
 3. Where a size designation is indicated, that designation indicates the nominal maximum size of the coarse aggregate.
 4. Aggregate may contain materials deleteriously reactive with alkalies in the cement, if cement contains less than 0.60 percent alkalies (percent Na₂O plus .658 percent K₂O). Provide a material such as fly ash, slag, or silica fume as specified to be effective in preventing harmful expansion due to alkali-aggregate reaction by ASTM C441.
 5. Where historical data is used, provide aggregates from the same sources having the same size ranges as those used in the concrete represented by historical data.
 6. Marine aggregate may be used when conforming to ASTM C33 and if it originates from the up-current side of the land mass and it has been washed by the fresh water so that the total chloride and sulfate content of the concrete mixture does not exceed the limits defined herein.
- D. Grout:

1. Nonshrink Type Grout: Comply with ASTM C1107. Provide Sika Grout 212 or approved equal.
2. Epoxy Type Grout: Provide Five Star HP Epoxy Grout manufactured by Five Star Products, Inc., Fairfield, Conn.; Keligrout as manufactured by Kelkan Construction Systems; or approved equal.

E. Admixtures:

1. Provide chemical admixtures that comply with the requirements shown below and in accordance with manufacturer's recommendations, and appropriate for the climatic conditions and the construction needs. Do not use calcium chloride or admixtures containing chlorides from other than impurities from admixture ingredients.
2. Concentrations of corrosion-inducing chemicals shall not exceed limits shown in Table 2 below.

For concrete that may be in contact with prestressing steel tendons, the concentration shall not exceed 60 percent of the limits given in Table 2.

Table 2 - Limits on Corrosion-Inducing Chemicals

<u>Chemical*</u>	<u>Limits, Percent**</u>	<u>Test Method</u>
Chlorides	0.10	ASTM D512
Fluorides	0.10	ASTM D1179
Sulphites	0.13	ASTM D1339
Nitrates	0.17	ASTM D3867

* Limits refer to water-soluble chemicals

** Limits are expressed as a percentage of the mass of the total cementitious materials.

3. The total alkali content shall not increase the total sodium-oxide equivalent alkali content of the concrete by more than 0.5 lb/yd³.
4. Air Entraining Admixture: Provide air entraining admixtures conforming to ASTM C260. Provide the admixture of such a type and dosage that the total air content in the hardened concrete can be readily maintained within 4.5 to 7.5 percent total air content by volume.
5. Accelerating: Comply with ASTM C494, Type C.
6. Retarding: Comply with ASTM C494, Type B, D, or G.
7. Water Reducing: Comply with ASTM C494, Type A, E, or F.
8. High Range Water Reducer (HRWR): Comply with ASTM C494, Type F and ASTM C1017.
9. Corrosion Inhibiting: Provide corrosion inhibitor containing 30% calcium nitrite by mass, conforming to the requirements of Section 711-13 of the New York State Department of Transportation Standard Specifications (NYSDOT SS). Dosage shall be 5.4 gallons per cubic yard for precast/prestressed deck planks and pile caps; 3.0 gallons per cubic yard for all other marine concrete. Water content of corrosion inhibitor shall be considered as 7.3 pounds per gallon in computing the water/cement ratio of the overall mix.

F. Fiber Reinforcement Material (For Concrete Topping Slab Only):

1. Provide virgin Nylon type monofilament fiber material for addition to concrete mix as approved by Commissioner.
2. Fibers shall be white color, $\frac{3}{4}$ inch long, of uniform size.
3. Dosage rate shall be as specified in Article "Concrete Quality and Proportioning".

G. Materials for Forms:

1. General: Provide forms of wood, plywood, or steel as specified. Use plywood or steel forms where a smooth form finish is required. Lumber shall be square edged or tongue-and-groove boards, free of raised grain, knotholes, or other surface defects. Plywood shall be PS-1, B-B faced concrete form panels or better. Steel form surfaces shall not contain irregularities, dents, or sags.
2. Form Ties and Form-Facing Material:
 - a. Provide a form tie system that does not leave mild steel after break-off or removal any closer than 2 inches from the exposed surface. Do not use wire alone. Form ties and accessories shall not reduce the effective cover of the reinforcement.
 - b. Form-facing material shall be structural plywood or other material that can absorb air trapped in pockets between the form and the concrete and some of the high water-cementitious materials ratio surface paste. Maximum form-facing use shall be three times. Provide forms with a form treatment to prevent bond of the concrete to the form.
 - c. As an option to using an absorptive wood form contact face as a form liner, use "Zendrain" or an approved equal in strict accordance with the manufacturer's recommendations.

H. Reinforcement:

1. Reinforcing Bars: Comply with ASTM A615/A615M Grade 60. Unless otherwise indicated, bars shall be epoxy coated in conformance with ASTM A775/A775M. Splices shall conform to the requirements of ACI 318 and ACI 315.
2. Mechanical Reinforcing Bar Connectors: Comply with ACI 301. Provide 125 percent minimum yield strength of the reinforcement bar. Coat connectors in accordance with the same requirements as reinforcing bars.
3. Welded Wire Fabric: Comply with ASTM A185 or ASTM A497, epoxy coated per ASTM A884/A 884M. Provide flat sheets of welded wire fabric for slabs and toppings.
4. Wire: Comply with ASTM A82 or ASTM A496, epoxy coated per ASTM 84/A884M.

I. Materials for Curing Concrete:

1. Impervious Sheeting: Comply with ASTM C171; waterproof paper type, clear or white polyethylene sheeting, or polyethylene-coated burlap.
2. Pervious Sheeting: Comply with AASHTO M 182.
3. Liquid Membrane-Forming Compound: Comply with ASTM C309, white-pigmented,

Type 2, Class B.

J. Joint Materials:

1. Polyethylene Bond Breaker: Provide polyethylene sheeting conforming to ASTM D2103, 6mil thick (0.006 inch), unless other thickness indicated to suit condition.
2. Expansion/Contraction Joint Filler: Comply with ASTM D1751 or ASTM D1752, ½ inch thick, unless otherwise indicated.
3. Joint Sealants:
 - a. Horizontal Surfaces, 3 Percent Slope, Maximum: Comply with ASTM D1190 or ASTM C920, Type M, Class 25, Use T.
 - b. Vertical Surfaces Greater Than 3 Percent Slope: Comply with ASTM C920, Type M, Grade NS, Class 25, Use T.

K. Epoxy Bonding Compound: Comply with ASTM C881. Provide Type I for bonding hardened concrete to hardened concrete; Type II for bonding freshly mixed concrete to hardened concrete; and Type III as a binder in epoxy mortar or concrete, or for use in bonding skid-resistant materials to hardened concrete. Provide Grade 1 or 2 for horizontal surfaces and Grade 3 for vertical surfaces. Provide Class A if placement temperature is below 40 degrees F.; Class B if placement temperature is between 40 and 60 degrees F.; or Class C if placement temperature is above 60 degrees F.

L. Sleeves:

1. Sleeves for typical penetrations of conduits and pipes and for drain sleeves shall be PVC Schedule 40 conforming to provisions of ASTM D1785.
2. Where otherwise indicated and for utility penetrations at bulkhead and for mooring cleats, sleeves shall be hot dip galvanized steel pipe conforming to ASTM A53, Grade 3, standard weight (Schedule 40).

2.3 BATCHING, MEASURING, MIXING, AND TRANSPORTING CONCRETE

A. General: Conform to ASTM C94, ACI 301, and ACI 304R, except as modified herein. Batching equipment shall be such that the concrete ingredients are consistently measured within the following tolerances: One (1) per cent for cement and water, 2 percent for aggregate, and 3 percent for admixtures.

1. Furnish mandatory batch tickets imprinted with mix identification, batch size, batch design and measured weights, moisture in the aggregates, and time batched for each load of ready mix concrete within one (1) business day of delivery of concrete to the site of placement.
2. When a pozzolan is batched cumulatively with the cement, it shall be batched after the cement has entered the weight hopper.

B. Measuring: Make measurements at intervals as specified in Part 3 Article "Field Quality Control" (paragraphs entitled "Sampling" and "Testing"). Adjust batch proportions to replicate

the mixture design using methods provided in the approved quality assurance plan. Base the adjustments on results of tests of materials at the batch plant for use in the work. Maintain a full record of adjustments and the basis for each.

- C. **Mixing:** Conform to ASTM C94 and ACI 301. Machine mix concrete. Begin mixing within 30 minutes after the cement has been added to the aggregates. Place concrete within 90 minutes of either addition of mixing water to cement and aggregates or addition of cement to aggregates if the air temperature is less than 85 degrees F.
1. Reduce mixing time and place concrete within 60 minutes if the air temperature is greater than 85 degrees F except as follows: if set retarding admixture is used and slump requirements can be met, limit for placing concrete may remain at 90 minutes.
 2. Additional water may be added, if both the specified maximum slump and water-cementitious material ratio are not exceeded. When water is added, an additional 30 revolutions of the mixer at mixing speed is required.
 3. If time of discharge exceeds time required by ASTM C94, submit a request along with description of precautions to be taken.
 4. If the entrained air content falls below the specified limit, add a sufficient quantity of admixture to bring the entrained air content within the specified limits. Dissolve admixtures in the mixing water and mix in the drum to uniformly distribute the admixture throughout the batch.
- D. **Transporting:** Transport concrete from the mixer to the forms as rapidly as practicable. Prevent segregation or loss of ingredients. Clean transporting equipment thoroughly before each batch. Do not use aluminum pipe or chutes. Remove and dispose of concrete that has segregated in transporting.

PART 3 - EXECUTION

3.1 EXISTING SURFACES PREPARATION

- A. Where concrete is placed on top of existing waterfront structure concrete surfaces, existing concrete shall be cleaned and coated with an approved epoxy bonding compound.
- B. Dewater existing pile dowel sleeves prior to installing grout and reinforcement materials.

3.2 FORMS

- A. **General:** Conform to ACI 301 as a minimum. Set forms mortar-tight and true to line and grade. Chamfer above grade exposed joints, edges, and external corners of concrete $\frac{3}{4}$ inch unless otherwise indicated.
 1. Provide formwork with clean-out openings to permit inspection and removal of debris.
 2. Formwork shall be gasketed or otherwise rendered sufficiently tight to prevent leakage

- of paste or grout under heavy, high-frequency vibration.
3. Limit reuse of plywood forms to no more than three times. Reuse may be further limited by the Construction Manager if it is found that the pores of the plywood are clogged with paste to the degree that the wood does not absorb the air or the high water-cementitious materials ratio concrete surface.
- B. Form Coating: Before concrete placement, coat the contact surfaces of forms with a nonstaining mineral oil, nonstaining form coating compound, or two coats of nitrocellulose lacquer. Use a release agent that does not cause surface dusting. Do not use mineral oil on forms for surfaces to which adhesive, paint, or other finish material is to be applied.
- C. Removal of Forms and Supports: After placing concrete, forms shall remain in place for the time periods specified in ACI 347R, except for concrete placed underwater. For concrete placed underwater, forms shall remain in place 48 hours unless otherwise indicated and approved to remain in place. Prevent concrete damage during form removal.
1. Special Requirements for Reduced Time Period. Forms may be removed earlier than specified if ASTM C39 test results of field-cured samples from a representative portion of the structure or other approved and calibrated non-destructive testing techniques show that the concrete has reached a minimum of 85 percent of the design strength.
- D. Reshoring: Do not allow construction loads to exceed the superimposed load which the structural member, with necessary supplemental support, is capable of carrying safely and without damage. Reshore concrete elements where forms are removed prior to the specified time period. Do not permit elements to deflect or accept loads during form stripping or reshoring.
1. Forms on columns, walls, or other load-bearing members may be stripped after 2 days if loads are not applied to the members.
 2. After forms are removed, slabs and beams over 10 feet in span and cantilevers over 4 feet shall be reshored for the remainder of the specified time period in accordance with paragraph entitled "Removal of Forms and Supports".
 3. Perform reshoring operations to prevent subjecting concrete members to overloads, eccentric loading, or reverse bending. Reshoring elements shall have the same load-carry capabilities as original shoring and shall be spaced similar to original shoring. Firmly secure and brace reshoring elements to provide solid bearing and support.
- E. Patch form tie holes with a nonshrink patching material in accordance with the manufacturer's recommendations and subject to approval.

3.3 PLACING REINFORCEMENT AND MISCELLANEOUS MATERIALS

- A. Conform to ACI 301 as a minimum. Remove rust, scale, oil, grease, clay, or foreign

- substances from reinforcing that would reduce the bond of the reinforcing. Do not tack weld. Inspect placed coated steel reinforcing for coating damage prior to placing concrete. Repair all visible damage.
- B. Epoxy coated reinforcing shall meet the requirements of ASTM A775/A775M except as otherwise specified herein.
1. Reinforcing Steel Delivery, Handling, and Storage:
 - a. For coated bars, record coating lot on each shipping notice and carefully identify and retag bar bundles from bending plant. Provide systems for handling coated bars which have padded contact areas, nylon slings, etc., all free of dirt and grit. Lift bundled coated bars with strong back, multiple supports, or platform bridge to prevent sagging and abrasion. Bundling bands shall be padded where in contact with bars. Do not drop or drag bars or bundles.
 - b. Store bars both in shop and in field, above ground, on wooden or padded cribbing. Space the dunnage close enough to prevent excessive sags. Stack large quantities of straight bars with adequate protective blocking between layers.
 - c. Schedule deliveries of bars to the job site to avoid the need for long term storage. Protect from direct sunlight and weather. Bars to be stored longer than 12 hours at the job site shall be covered with opaque polyethylene sheeting or other suitable equivalent protective material.
 2. Reinforcing Steel Placement and Coating Repair: Carefully handle and install bars to minimize job site coating repair. Use the same precautions as described above for delivery, handling, and storage when placing reinforcement. Do not drag bars over other bars or over abrasive surfaces. Keep bar free of dirt and grit. When possible, assemble reinforcement as tied cages prior to final placement into the forms. Support assembled cages on padded supports. It is not expected that coated bars, when in final position ready for concrete placement, will be completely free of damaged areas; however, excessive nicks and scrapes exceeding the limits specified by ASTM A775/A775M, which expose steel will be cause for rejection. Criteria for defects which require repair and for those that do not require repair are as indicated. Inspect for defects and provide required repairs prior to assembly. After assembly, re-inspect and provide final repairs.
 - a. Immediately prior to application of the patching material to damaged coated bars, any rust and debonded coating shall be manually removed from the reinforcement by suitable techniques employing devices such as wire brushes and emery paper. Care shall be exercised during this surface preparation so that the damaged areas are not enlarged more than necessary to accomplish the repair. Damaged areas shall be clean of dirt, debris, oil, and similar materials prior to application of the patching material.
 - b. Repair and patching of coated bars shall be done in accordance with the patching material manufacturer's recommendations. These recommendations, including cure times, shall be available at the job site at all times.

- c. Allow adequate time for the patching materials to cure in accordance with the manufacturer's recommendation prior to concrete placement.
 - d. Rinse placed reinforcing bars with fresh water to remove chloride contamination prior to placing concrete.
3. Reinforcement Supports: Place reinforcement and secure with non-corrodible chairs, spacers, or metal hangers. Support reinforcement on the ground with concrete or other non-corrodible material, having a compressive strength equal to or greater than the concrete being placed.
- a. Epoxy-coated reinforcing bars supported from formwork shall rest on coated wire bar supports, or on bar supports made of dielectric material or other acceptable material.
 - b. Wire bar supports shall be coated with dielectric material, compatible with concrete, for a minimum distance of 2 inches from the point of contact with the epoxy-coated reinforcing bars.
 - c. Proprietary combination bar clips and spreaders used in construction with epoxy-coated reinforcing bars shall be made corrosion resistant or coated with dielectric material.
 - d. Epoxy-coated bars shall be tied with plastic-coated tie wire; or other materials acceptable to the Commissioner.
4. Splicing: As indicated. For splices not indicated, conform to ACI 301 and ACI 318. Do not splice at points of maximum stress. Overlap welded wire fabric the spacing of the cross wires, plus 2 inches.
5. Cover: Concrete cover for reinforcement is shown in Table 3. Placement tolerance is plus 1/4 inch. The cover to the principle reinforcing bars shall be not less than 2 times the nominal maximum aggregate size nor less than 1.5 times the effective diameter of the reinforcing bars.

Table 3 -- Minimum Concrete Cover Over Reinforcement	
<u>Zone</u>	<u>Cover over reinforcing steel</u>
Atmospheric zone not subject to salt spray	2½ inches.
Tidal, splash, and atmospheric zone subject to salt spray	3 inches.
Submerged zone	2½ inches.
Cover of stirrups	½ inch. less than those listed above

C. Setting Miscellaneous Material:

- 1. Place and secure anchors, bolts, pipe sleeves, conduits, and other such items in position before concrete placement. Plumb sleeves and anchor bolts and check

location and elevation. Temporarily fill voids in sleeves with readily removable material to prevent the entry of concrete. Electrically isolate exposed steel work and its anchor systems from the primary steel reinforcement with at least 2 inches of concrete.

2. Coat exposed steel work to reduce corrosion. Take particular care to ensure against corrosion on edges and horizontal surfaces. Use epoxy coatings for protection of carbon steel plates and fittings.
- D. Joints: Provide joints in concrete construction as indicated and/or suit conditions specified as approved by Commissioner. Protect and maintain all constructed joints from intrusion of foreign matter.
1. Construction Joints: Locate construction joints to least impair strength (generally at the quarter points of the spans) and at Commissioner approved locations prior to concrete placement. Continue reinforcement across joints unless otherwise indicated.
 2. Expansion joints:
 - a. Except where preformed compression sealed joints are shown, provide expansion joint at edges of slabs on grade abutting vertical surfaces, aligned with and above existing expansion joints where top of bulkhead is being raised and as indicated. Make expansion joints $\frac{1}{2}$ inch wide unless indicated otherwise.
 - 1) Fill expansion joints not exposed to weather with preformed joint filler material. Completely fill joints exposed to weather with joint filler material and joint sealant. Do not extend reinforcement or other embedded metal items bonded to the concrete through any expansion joint unless an expansion sleeve is used.
 3. Contraction Joints: Place contraction joints, either formed or saw cut or cut with a jointing tool, to the indicated depth after the surface has been finished. Sawed joints shall be completed within 4 to 12 hours after concrete placement.
- E. Pits and Trenches: Place bottoms and walls monolithically unless indicated otherwise.

3.4 PLACING CONCRETE

- A. Place concrete as soon as practicable after the forms and the reinforcement have been inspected and approved. Do not place concrete when weather conditions prevent proper placement and consolidation; in uncovered areas during periods of precipitation; or in standing water. Prior to placing concrete, remove dirt, construction debris, water, snow, and ice from within the forms.
1. Deposit concrete as close as practicable to the final position in the forms. Do not exceed a free vertical drop of 3 feet from the point of discharge. Place concrete in one continuous operation from one end of the structure towards the other or in lifts for placing concrete in vertical construction.
 2. Position grade stakes on 10-foot centers maximum in each direction when pouring

- topping slabs.
3. When placing concrete in the tidal zone, begin placement on a falling tide after the water level has fallen below a level where waves will not overtop or enter into the form.
- B. Vibration: Comply with the requirements of ACI 309R and ASTM A775/A775M using vibrators with a minimum frequency of 9000 vibrations per minute (VPM). Use only high cycle or high frequency vibrators. Motor-in-head 60 cycle vibrators may not be used. For walls and deep placement conditions (ie: beams), use a minimum of two vibrators with the first to melt down the mixture and the second to thoroughly consolidate the mass. Furnish and maintain spare vibrator(s) at the casting site whenever concrete is placed.
1. Place concrete in 18-inch maximum vertical lifts. Insert and withdraw vibrators approximately 18 inches apart. Penetrate at least 8 inches into the previously placed lift with the vibrator when more than one lift is required. Extract the vibrator using a series of up and down motions to drive the trapped air out of the concrete and from between the concrete and the forms.
 2. For slab construction, use vibrating screeds designed to consolidate the full depth of the concrete. Where beams and slabs intersect, use an internal vibrator to consolidate the beam. Do not vibrate concrete placed with anti-washout admixtures. Vibrators shall be equipped with rubber vibrator heads.
- C. Application of Epoxy Bonding Compound: Apply a thin coat of compound to dry, clean surfaces. Scrub compound into the surface with a stiff-bristle brush. Place concrete while compound is tacky. Do not permit compound to harden prior to concrete placement. Follow manufacturer's instructions regarding safety and health precautions when working with epoxy resins.
- D. Pumping: Conform to ACI 304R and ACI 304.2R as a minimum. Pumping shall not result in separation or loss of materials nor cause interruptions sufficient to permit loss of plasticity between successive increments. Loss of slump in pumping equipment shall not exceed 2 inches. Do not use pipe made of aluminum or aluminum alloy. Avoid rapid changes in pipe sizes. Limit maximum size of coarse aggregate to 33 percent of the diameter of the pipe. Maximum size of well-rounded aggregate shall be limited to 40 percent of the pipe diameter.
1. Take samples for testing at both the point of delivery to the pump and at the discharge end.
- E. Cold Weather: Conform to ACI 306.1 as a minimum. Do not allow concrete temperature to decrease below 50 degrees F. Obtain approval prior to placing concrete when ambient temperature is below 40 degrees F. or when concrete is likely to be subjected to freezing temperatures within 24 hours. Cover concrete and provide sufficient heat to maintain 50 degrees F. minimum adjacent to both the formwork and the structure while curing. Limit the rate of cooling to 5 degrees F. in any one hour and 50 degrees F. per 24 hours after heat application.
- F. Hot Weather: Conform to ACI 305R as a minimum. Maintain required concrete

temperature using Figure 2.1.5, "Effect of Concrete Temperatures, Relative Humidity, and Wind Velocity on the Rate of Evaporation of Surface Moisture From Concrete" in ACI 305R to prevent the evaporation rate from exceeding 0.2 pound of water per square foot of exposed concrete per hour. Cool ingredients before mixing or use other suitable means to control concrete temperature and prevent rapid drying of newly placed concrete. Shade the fresh concrete as soon as possible after placing.

1. Start curing when the surface of the fresh concrete is sufficiently hard to permit curing without damage. Provide water hoses, pipes, spraying equipment, and water hauling equipment, where job site is remote to water source, to maintain a moist concrete surface throughout the curing period.
2. Provide burlap cover or other suitable, permeable material with fog spray or continuous wetting of the concrete when weather conditions prevent the use of either liquid membrane curing compound or impervious sheets.
3. For vertical surfaces, protect forms from direct sunlight and add water to top of structure once concrete is set.

3.5 SURFACE FINISHES EXCEPT SLABS

- A. Surfaces Not Against Forms (Top of Walls): Finish surfaces not otherwise specified with wood floats to even surfaces, and match adjacent finishes.
- B. Formed Surfaces:
 1. Tolerances: Conform to ACI 117 and to requirements as indicated.
 2. As-Cast Rough Form: Provide for surfaces not exposed to public view. Patch holes and defects and level abrupt irregularities. Remove or rub off fins and other projections exceeding 0.25 inch in height.
 3. As-Cast Form (for surfaces exposed to view): Provide form-facing material producing a smooth, hard, uniform texture on the concrete. Arrange facing material in an orderly and symmetrical manner and keep seams to a practical minimum. Support forms as necessary to meet required tolerances. Material with raised grain, torn surfaces, worn edges, patches, dents, or other defects that will impair the texture, appearance and durability of the concrete surface shall not be used. Patch tie holes and defects with epoxy mortar and completely remove fins.
- C. Defects: Repair formed surfaces by removing minor honeycombs, pits greater than one square inch surface area or 0.25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with nonshrink grout. Patch tie holes and defects when the forms are removed. Concrete with extensive honeycomb including exposed steel reinforcement, cold joints, entrapped debris, separated aggregate or other defects that affect the serviceability or structural strength will be rejected, unless correction of defects is approved. Obtain approval of corrective action prior to repair. The surface of the concrete shall not vary more than the allowable tolerances of ACI 347R. Exposed surfaces shall be uniform in appearance and finished to a smooth form finish unless otherwise indicated.

1. Defects shall be defined by the more stringent of ACI 301 requirements for "Architectural Concrete" or the following:
 - a. Pockets of honeycomb (uncemented coarse aggregate) more than one-inch deep and 100 sq. in. area are found.
 - b. Sand streaks (pockets or streaks of uncemented fine aggregate more than one inch deep and 100 sq. in. area) are found.
 - c. Corners of forms are not filled.
 - d. Bottom of concrete is not down to indicated levels or shows uncemented material at the bottom.
 - e. Members are undersize.
 - f. Concrete fails to "set-up" (indents under a hammer blow, after 7 days).

3.6 FINISHES FOR HORIZONTAL CONCRETE SURFACES

- A. Conform to ACI 301 for finishing and to placing requirements as indicated. Place, consolidate, and immediately strike off concrete to obtain proper contour, grade, and elevation before bleedwater appears. Permit concrete to attain a set sufficient for floating and supporting the weight of the finisher and equipment. If bleedwater is present prior to floating the surface, drag excess water off or remove by absorption with porous materials. Do not use dry cement to absorb bleedwater.
 1. Scratched: Use a scratched finish for surfaces intended to receive bonded applied cementitious applications. After the concrete has been placed, consolidated, struck off, and leveled, the surface shall be roughened with stiff brushes or rakes before final set.
 2. Floated: Use a floated finish for deck slabs where not otherwise specified. After the concrete has been placed, consolidated, struck off, and leveled, do not work the concrete further, until ready for floating. Whether floating with a wood, magnesium, or composite hand float, with a bladed power trowel equipped with float shoes, or with a powered disc, floating shall begin when the surface has stiffened sufficiently to permit the operation.
 3. Concrete Toppings Placement: Conform to ACI 301 as a minimum and the following requirements that apply to the placement of toppings of concrete on concrete surfaces that are either freshly placed or still plastic, or on hardened base slabs.
 - a. Placing on Fresh Concrete: Screed and bull float the base slab. As soon as water sheen has disappeared, lightly rake surface of the base slab with a stiff bristle broom to produce a bonding surface for the topping. Immediately spread topping mixture evenly over the roughened base before final set takes place. Finish the concrete topping slab as specified.
 - b. Bonding to a Hardened Concrete: When the topping is to be bonded to a roughened hardened base, remove dirt, laitance, and loose aggregate by means of a stiff wire broom. Keep the clean base wet for a period of 12 hours preceding the application of the topping. Remove excess water and apply a 1:1:1/2 cement-sand-water grout, and brush into the surface of the base slab. Do not allow the cement grout to dry, and spread it only short distances a head of the topping

placement. Do not allow the temperature differential between the completed base and the topping mixture to exceed 10 degrees F. at the time of placing. Place the concrete topping slab and finish as specified.

3.7 CURING AND PROTECTION

- A. All concrete shall be cured using the moist (wet) curing method(s) specified unless otherwise approved by Commissioner for a specific condition, and shall be in accordance with these specifications.
- B. Conform to ACI 301 and ACI 308 unless otherwise specified. Prevent concrete from drying by misting surface of concrete until curing commences. Begin curing immediately following final set.
 - 1. Avoid damage to concrete from vibration created by blasting, pile driving, movement of equipment in the vicinity, disturbance of formwork or protruding reinforcement, by rain or running water, adverse weather conditions, and any other activity resulting in ground vibrations.
 - 2. Protect concrete from injurious action by sun, rain, flowing water, frost, mechanical injury, tire marks, and oil stains. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period.
 - 3. Do not use membrane-forming compound on surfaces where exposed to public view unless approved by the Commissioner, on any surface to be painted, where coverings are to be bonded to the concrete, or on concrete to which other concrete is to be bonded.
 - 4. If forms are removed prior to the expiration of the curing period, provide another curing procedure specified herein for the remaining portion of the curing period.
- C. Wet cure concrete using potable water for a minimum of 7 days. Do not allow construction loads to exceed the superimposed load that the structural member, with necessary supplemental support, is capable of carrying safely and without damage.
- D. Moist Wet Curing: Remove water without erosion or damage to the structure.
 - 1. Ponding or Immersion: Continually immerse the concrete throughout the curing period. Water shall not be 20 degrees F. less than the temperature of the concrete. For temperatures between 40 and 50 degrees F., increase the curing period by 50 percent.
 - 2. Fog Spraying or Sprinkling: Apply water uniformly and continuously throughout the curing period. For temperatures between 40 and 50 degrees F, increase the curing period by 50 percent.
 - 3. Pervious Sheeting: Completely cover surface and edges of the concrete with two thicknesses of wet sheeting. Overlap sheeting 6 inches over adjacent sheeting. Sheeting shall be at least as long as the width of the surface to be cured. During application, do not drag the sheeting over the finished concrete or over sheeting already placed. Wet sheeting thoroughly and keep continuously wet throughout the curing period.
 - 4. Impervious Sheeting: Wet the entire exposed surface of the concrete thoroughly with a fine spray of water and cover with impervious sheeting throughout the curing period.

- a. Lay sheeting directly on the concrete surface and overlap edges 12 inches minimum.
Provide sheeting not less than 18 inches wider than the concrete surface to be cured.
 - b. Secure edges and transverse laps to form closed joints. Repair torn or damaged sheeting or provide new sheeting.
 - c. Cover or wrap columns, walls, and other vertical structural elements from the top down with impervious sheeting; overlap and continuously tape sheeting joints; and introduce sufficient water to soak the entire surface prior to completely enclosing.
- E. Liquid Membrane-Forming Curing Compound: Seal or cover joint openings prior to application of curing compound. Prevent curing compound from entering the joint. Apply in accordance with the recommendations of the manufacturer immediately after any water sheen that may develop after finishing has disappeared from the concrete surface. Provide and maintain compound on the concrete surface throughout the curing period. Do not use this method of curing where the use of Figure 2.1.5, "Effect of Concrete Temperatures, Relative Humidity, and Wind Velocity on the Rate of Evaporation of Surface Moisture From Concrete" in ACI 305R indicates that hot weather conditions will cause an evaporation rate exceeding 0.2 pound of water per square foot per hour.
1. Application: Mechanically agitate curing compound thoroughly during use. Use approved power-spraying equipment to uniformly apply two coats of compound in a continuous operation. The total coverage for the two coats shall be 200 square feet maximum per gallon of undiluted compound unless otherwise recommended by the manufacturer's written instructions. The compound shall form a uniform, continuous, coherent film that will not check, crack, or peel. Immediately apply an additional coat of compound to areas where the film is defective. Respray concrete surfaces subjected to rainfall within 3 hours after the curing compound application.
 2. Protection of Treated Surfaces: Prohibit pedestrian and vehicular traffic and other sources of abrasion at least 72 hours after compound application. Maintain continuity of the coating for the entire curing period and immediately repair any damage.
- F. Curing Periods: Moist cure concrete using potable water for a minimum of 7 days. Continue additional curing for a total period of 21 days. Begin curing immediately after placement. Protect concrete from premature drying, excessively hot temperatures, and mechanical injury; and maintain minimal moisture loss at a relatively constant temperature for the period necessary for hydration of the cement and hardening of the concrete. The materials and methods of curing shall be subject to approval by the Commissioner.

3.8 FIELD QUALITY CONTROL

- A. General: Costs for specified field inspection of reinforcing steel and placing concrete; for plant inspection at the mixer related to concrete placed in the field; and for the taking, collecting, and testing concrete cylinders in the field will be paid by the City of New York and will be under

the direction of Construction Manager.

1. Contractor shall assist the Construction Manager and Commissioner's Testing Agency/Laboratory to perform all sampling and testing specified in this Article during construction by providing incidental labor to collect and store samples.
 - a. In cold weather conditions, Contractor shall provide a uniformly heated enclosure (minimum 65 degrees F.) for on-site storage of test cylinders until the testing laboratory picks them up.
 2. Concrete inspections and testing will include but not be limited to the following:
 - a. Forms will be inspected to see that they are in the correct location and that they will result in concrete of the required dimensions as shown on Contract Drawings.
 - b. Reinforcement installations will be checked for size, bending, spacing, location, firmness of installation, and surface condition. Reviewed shop drawings should be used in conjunction with Contract Documents.
 - c. Operations of mixing, conveying, placing, compacting, finishing, and curing of concrete will be inspected and will include control of field proportioning and field testing.
 3. Should test(s) yield results which do not meet the requirements of the Contract Documents, the Contractor will be required to perform coring for additional testing and/or replacement of defective concrete as directed/approved by Commissioner.
- B. Evaluation of Mixture Designs (Using Test Slab and Wall):
1. The adequacy of the mixture design to produce the minimum specified strength and durability shall be confirmed by testing field batches; casting concrete in a slab and a wall at the job using job materials, equipment, and personnel; and testing the hardened concrete as described herein. Contractor shall cast the slab and wall. The slab shall be at least 8 feet square and have thickness of at least 8 inches. The wall shall be 8 feet long, 4 feet high and at least 8 inches thick. Slump shall not exceed the slump proposed for the work. Water cure the castings for 7 days.
 2. Test the fresh concrete as follows:
 - a. Slump in accordance with ASTM C143.
 - b. Air content in accordance with ASTM C231 or ASTM C173.
 - c. Unit weight in accordance with ASTM C138.
 - d. For strength, cast nineteen 6 by 12 inch cylinders in accordance with ASTM C31/C31M.
 3. Test 6 by 12 inch cylinders cast under subparagraph d above as follows:
 - a. Measure and weigh each specimen to determine unit weight as they are stripped from the molds.
 - b. Test specimens to be tested at each age for pulse velocity through concrete in accordance with ASTM C597.
 - c. Two at each age of 24 hours and 3 and 7 days in accordance with ASTM C39.
 - d. Three at each age of 28, 56, and 90 days in accordance with ASTM C39.

- e. Two at each age of 28 and 90 days in accordance with ASTM C496.
4. Take twenty-five 4-inch cores from each the wall and the slab in accordance with ASTM C42. Those to be tested at 7 days or earlier age shall be drilled on the test date and tested as cored. Those to be tested at later ages shall be drilled in adequate time for wet curing before testing. Test cores as follows:
- a. All cores: Pulse velocity through concrete in accordance with ASTM C597.
- b. Two cores: Static modulus of elasticity in accordance with ASTM C469 at age 28 days.
- c. Two cores: Specific gravity, absorption, and voids in concrete in accordance with ASTM C642.
- d. Three cores: Resistance to chloride ion penetration in accordance with ASTM C1202 at ages 28 and 90 days.
- e. Compressive strength in accordance with ASTM C39 as follows:

two cores at 24 hours one core at 3 days
two cores at 7 days three cores at 28 days
two cores at 90 days three spare cores

5. Sampling and determination of water-soluble chloride ion content in accordance with ASTM C1218/C1218M. Maximum water soluble chloride ion concentrations in hardened concrete at ages from 28 to 42 days contributed from the ingredients including water, aggregates, cementitious materials, and admixtures shall not exceed 0.08 percent by weight of cement for non- prestressed concrete and 0.06 percent by weight of cement for prestressed concrete.
6. Submit test results for evaluation and acceptance.

C. Sampling:

1. Samples of fresh concrete collected to perform tests specified will be in accordance with ASTM C172 and ASTM C31/C31M for making test specimens.
2. Sample concrete on a random basis except where a batch appears to be deficient and the test can be used to verify the observed deviation. Identify samples so taken in a manner that they can be segmented from other tests. Obtain at least one sample for each 100 cubic yards, or fraction thereof, of each design mixture of concrete placed in any one day. When the total quantity of concrete with a given design mixture is less than 50 cubic yards, the strength tests may be waived by the Commissioner, if in his judgment, adequate evidence of satisfactory strength is provided.
3. For pumped concrete, take samples for testing at both the point of delivery to the pump and at the discharge end.

D. Testing:

1. Slump Tests: Take concrete samples for slump tests during concrete placement in accordance with ASTM C143. The maximum slump may be increased as specified with the addition of an approved high range water reducing (HRWR) admixture provided that the water-cement ratio is not exceeded. Perform tests at commencement of

concrete placement, when test cylinders are made, and for each batch (minimum) or every 10 cubic yards (maximum) of concrete.

2. Temperature Tests:
 - a. Test the concrete delivered and the concrete in the forms. Perform tests in hot or cold weather conditions below 50 degrees F. and above 80 degrees F. for each batch (minimum) or every 10 cubic yards (maximum) of concrete, until the specified temperature is obtained, and whenever test cylinders and slump tests are made.
 - b. Determine temperature of each composite sample in accordance with ASTM C1064. When the average of the highest and lowest temperature during the period from midnight to midnight is expected to drop below 40 degrees F. for more than 3 successive days, concrete shall be delivered to meet the following minimum temperature at the time of placement:
 - 1) 55 degrees F. for sections less than 12 inches in the least dimension.
 - 2) 50 degrees F. for sections 12 to 36 inches in the least dimension.
 - 3) 45 degrees F. for sections 36 to 72 inches in the least dimension.
 - 4) 40 degrees F. for sections greater than 72 inches in the least dimension.
 - c. The minimum requirements may be terminated when temperatures above 50 degrees F. occur during more than half of any 24-hour duration. The temperature of concrete at time of placement shall not exceed 90 degrees F.
3. Compressive Strength Tests: Conduct strength tests of concrete during construction in accordance with ACI 214 and the following procedures:
 - a. Mold and cure six 6 by 12 inch cylinders from each sample taken in accordance with ASTM C31/C31M. Prevent evaporation and loss of water from the specimen.
 - b. Test cylinders in accordance with ASTM C39. Test one cylinder at 3 days, two cylinders at 7 days, two cylinders at 28 days, and hold one cylinder in reserve. The compressive strength test results for acceptance shall be the average of the compressive strengths from the two specimens tested at 28 days. If one specimen in a test shows evidence of improper sampling, molding or testing, discard the specimen and consider the strength of the remaining cylinder to be the test result. If both specimens in a test show any defects, the Commissioner may allow the entire test to be discarded.
 - c. If the average of any three consecutive strength test results is less than the specified strength (f'_c) or the minimum test strength (f_{cr}) for durability, whichever is higher, by more the 500 psi, the Contractor shall take a minimum of three core samples in accordance with ASTM C42 from the in-place work represented by the low test results. Locations represented by erratic core strengths shall be retested and the Contractor will be back- charged for the cost of the testing. Remove concrete not meeting strength criteria and provide new acceptable concrete. Repair core holes with nonshrink grout. Match color and finish of adjacent concrete.

- d. Strength test reports shall include location in the work where the batch represented by a test was deposited, batch ticket number, time batched and sampled, slump, air content (where specified), mixture and ambient temperature, unit weight, and water added on the job. Reports of strength tests shall include detailed information of storage and curing of specimens prior to testing.
 4. Air Content: Conform to ASTM C173 or ASTM C231 for testing normal weight concrete. Make air content tests on samples from the first three batches in the placement and until three consecutive batches have air contents within the range of the specified air content, at which time test every fifth batch. Maintain this test frequency until a batch is not within the specified range at which time resume testing of each batch until three consecutive batches have air contents within the specified range.
 - a. Take air content tests from planned composite samples or from samples taken in accordance with ASTM C172 at the point of concrete placement.
 - b. Perform additional tests as necessary for control.
 5. Anti-Washout Admixture: Determine cumulative mass loss in accordance with COE CRD-C 61. Perform test once for each 350 cubic yards of underwater concrete.
- E. Non-Destructive Tests:
1. Use of the rebound hammer for non-destructive tests in accordance with ASTM C805, ASTM C597, or other non-destructive processes, may be permitted by the Commissioner in evaluating the uniformity and relative concrete strength in place or for selecting areas to be cored. Evaluate and validate test results conducted on properly calibrated equipment in accordance with standard ASTM procedures indicated.
 2. Core Tests: Obtain and test cores in accordance with ASTM C42. If concrete in the structure is dry under service conditions, air dry cores (temperature 60 to 80 degrees F, relative humidity less than 60 percent) for 7 days before testing and test dry.
 - a. If concrete in the structure will be more than superficially wet under service conditions, test the cores, after moisture conditioning, in accordance with ASTM C42. Take at least three representative cores from each member or area of concrete in place that is considered potentially deficient. Impair the strength of the structure as little as possible.
 - b. If, before testing, cores show evidence of having been damaged subsequent to or during removal from the structure, take replacement cores.
 - c. Fill core holes with low slump concrete or mortar of a strength equal to or greater than the original concrete.
 - d. Commissioner will evaluate and validate core tests in accordance with the specified procedures. Before testing in compression, test each core to determine pulse velocity through concrete in accordance with ASTM C597. Correlate pulse velocity of concrete cores with pulse velocity of in-place concrete.
- F. Acceptance of Concrete Strength:
1. Standard Molded and Cured Strength Specimens: When the averages of all sets

- of three consecutive compressive strength test results equal or exceed the design compressive strength (f'_c) or the required field test strength (f_{cr}) whichever is higher, and no individual strength test falls below the specified compressive strength (f'_c) or the required field durability strength (f_{cr}) by more than 500 psi, whichever is higher. These criteria also apply when accelerated strength testing is specified unless another basis for acceptance is specified.
2. Non-Destructive Tests: Non-destructive tests may be used when permitted to evaluate concrete where standard molded and cured cylinders have yielded results not meeting the criteria.
 3. Core Tests: When the average compressive strengths of the representative cores are equal to at least 85 percent of the design strength (f'_c) or the required average test strength (f_{cr}), whichever is higher, and if no single core is less than 75 percent of the specified strength (f'_c) or the required average field test strength (f_{cr}), whichever is higher, strength of concrete is satisfactory.
- G. Inspection: Inspect concrete placed under water with ACI 311.1R and with qualified Commissioner/Divers.
- H. Verification of Miscellaneous Items to be surveyed: The Contractor's Surveyor shall take optical survey measurements to certify the location of all conduit sleeves, deck openings, and anchor bolts for future work.

END OF SECTION 03 31 29

SECTION 03 41 00

PRECAST AND PRESTRESSED CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Work of this Section includes all labor, materials, equipment, and services necessary to provide plant precast/prestressed structural concrete deck planks, precast (non-prestressed) structural concrete deck planks, and other precast concrete units as shown on the Contract Drawings and/or specified herein.
 - 1. The work includes providing precast, non-prestressed concrete members herein referred to as precast members and precast, prestressed concrete members herein referred to as prestressed members.
 - 2. Precast concrete and precast prestressed concrete members shall be the product of a manufacturer specializing in the plant production of precast prestressed concrete structural members of types indicated for Project. Include production plant facility quality control specified herein as a minimum.
 - 3. Provide embedded accessory items.
 - 4. Set deck planks with grout filled keys between each plank.
- B. At Contractor's option, concrete pile caps structures may be constructed of precast concrete or cast-in-place concrete as approved by Commissioner. Constructed pile cap elements of structure shall comply with Contract Drawing details and specification requirements of indicated design criteria for elements and the Contract Documents.
- C. Related Sections include the following:
 - 1. General Conditions "Quality Requirements".
 - 2. Division 3 Section 033129 "Marine Concrete" for referenced concrete mix design criteria; referenced cement, water, aggregate, and admixture materials; other provisions related to providing concrete for production of indicated concrete elements; and cast-in-place concrete construction.

1.3 DESIGN AND PERFORMANCE REQUIREMENTS

- A. Concrete Mixture Design: Prior to precasting of concrete precast and concrete precast prestressed units, submit concrete mix design(s) and proportions for a concrete mixture for each strength and type of concrete to be used in precast concrete work as specified in Division 3 Section 033129 "Marine Concrete" in addition to requirements of this Section.
- B. Joint Construction: Joint sizes indicated between concrete elements and between concrete elements and other adjacent construction are based on joint conditions at a design temperature of 70 degrees F. Joint construction at other temperatures shall be adjusted in size to suit on-site temperature conditions at time of installation as approved by Commissioner.

1.4 SUBMITTALS

- A. General: Refer to and comply with General Conditions "Submittals Procedures", for procedures and additional submittal criteria.
 - 1. Relate to and arrange submittal requirements of this Section together with Division 3 Section 033129 "Marine Concrete".
 - 2. If, at Contractor's option, concrete pile caps and/or curb beams are proposed to be constructed of precast concrete in lieu of cast-in-place concrete, comply with applicable requirements for shop drawings and other submittals and concrete construction as specified in this Section in addition to applicable requirements of Division 3 Section 033129 "Marine Concrete" as approved by Commissioner.
- B. Qualification Submittals: Submit for the following and as additionally specified in Article "Quality Assurance" herein. Include lists of completed projects with project names and addresses, names and addresses of architects/engineers and owners, and other information specified.
 - 1. Pre-casting plant facilities.
- C. Product Data: Submit manufacturer's technical data and test reports for each material item and component of this Section including the following:
 - 1. Submit concrete materials and ingredients related to products used in concrete mix design(s) and submittal requirements for Test Reports specified herein.
 - 2. Submit for reinforcing, wire, and prestressing strand materials. Include mill certificates.
 - 3. Form materials and related forming accessories.
 - 4. Grouting materials of each type required.
 - 5. Submit for other materials proposed for use as requested by Commissioner.
- D. Shop Drawings: Submit Shop Drawings for precast and prestressed members including details of member geometry and details of reinforcing and embedments. Include complete information for the fabrication, handling, and erection of the precast concrete and precast

prestressed concrete members. Shop Drawings shall not be reproductions of Contract Drawings. Design calculations and drawings of precast concrete and precast prestressed concrete members (including connections) shall be prepared and sealed by Contractor's licensed Professional Engineer, and submitted for approval prior to fabrication.

1. General Requirements: Dimensions for precast and precast prestressed structural concrete work shall be confirmed and correlated at the job site. Shop drawings and other submittals shall include fabrication processes, techniques of construction, relationship of concrete work with embedded or built-in items, and relationship to adjacent construction.
 - a. After stake layout of on-site conditions, confirm locations of on-site elements together with Construction Manager and revise layout of reinforcing steel and form-work drawings as necessary to reflect adjustments.
2. Shop drawings for precast and prestressed members shall indicate, as a minimum, the following information:
 - a. Different precast unit and deck plank types.
 - b. Marking of members for erection.
 - c. Connections for work of other trades.
 - d. Connections between members, and connections between members and other construction.
 - e. Location and size of openings which cut prestressing strands, or require the relocation of prestressing strands to be cast in the member.
 - f. Location and sizes of recesses, depressions, pockets, penetrations, and embedded items.

For mooring cleat recesses and related anchor bolt sleeves, coordinate shop drawings with cleat units and related bolt locations with cleat unit approved for use by Commissioner.
 - g. Locations and provisions for deck drainage units.
 - h. Location and size of drainage holes and other holes or slots in fabricated units.
 - i. Joints between members, and joints between members and other construction.
 - j. Reinforcing, including prestressing steel details.
 - k. Schedule and sequence of tensioning and detensioning prestressing strands.
 - l. Material properties of steel and concrete used.
 - m. Lifting and erection inserts.
 - n. Dimensions and surface finishes of each member.
 - o. Estimated camber.
 - p. Erection sequence and handling requirements.
 - q. Handling loads used in design.
 - r. Bracing/shoring required.
 - s. Areas to receive concrete toppings, topping thickness.

E. Quality Control Submittals:

1. Conform to requirements specified in Division 3 Section 033129 "Marine Concrete" in

addition to requirements of this Section.

2. Design Data:

- a. Precast Concrete and Precast Prestressed Concrete Member Design Calculations: Design calculations and shop drawings of precast and prestressed members (including connections) shall be prepared and sealed by Contractor's licensed Professional Engineer, and submitted for approval prior to fabrication. Submit calculations for volume change as part of the design calculations.
- b. Concrete Mix Design Data: Submit a mix design for each strength and type of concrete.
Include a complete list of materials including type; brand; source and amount of cement, pozzolan, and admixtures; and applicable reference specifications.

- 1) Submit copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the job conditions. Obtain approval before concrete placement.

3. Test Reports:

- a. Pozzolan Test Reports: Submit results of pozzolan tests performed within 6 months of submittal date.
- b. Concrete mix test reports as per Division 3 Section 033129 "Marine Concrete".

F. Source Quality Control Data:

- 1. Submit quality control procedures and other data as required in Division 3 Section 033129 "Marine Concrete". Include submittal of quality control procedures established in accordance with PCI MNL-116.
- 2. Submit Concrete batch ticket information conforming to ASTM C94. Submit mandatory batch ticket information for each load of ready-mixed concrete.

1.5 REFERENCES AND STANDARDS

A. Publications listed below form a part of this specification Section to the extent referenced. Publications are referred to in the text by the basic designation only.

- 1. American Concrete Institute International (ACI). In the ACI publications, the advisory provisions shall be considered to be mandatory, as though the word "shall" has been substituted for "should", or "could", or "may", wherever they appear. Interpret reference to the "Building Official," the "Structural Engineer", and/or the "Architect/Engineer" to mean the Commissioner.

ACI 214	Evaluation of Strength Test Results of Concrete
ACI 304R	Measuring, Mixing, Transporting, and Placing Concrete
ACI 305R	Hot Weather Concreting ACI 306.1 Cold Weather Concreting
ACI 309R	Consolidation of Concrete
ACI 315	Details and Detailing of Concrete Reinforcement

ACI 318/318M Building Code Requirements for Structural Concrete

2. American Society for Testing and Materials (ASTM):

ASTM A82	Steel Wire, Plain, for Concrete Reinforcement
ASTM A185	Steel Welded Wire Fabric, Plain, for Concrete Reinforcement
ASTM A416/A416M	Steel Strand, Uncoated Seven-Wire for Prestressed Concrete
ASTM A497	Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement
ASTM A615/A615M	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM A706/A706M	Low-Alloy Steel Deformed Bars for Concrete Reinforcement
ASTM A775/A775M	Epoxy-Coated Steel Reinforcement Bars
ASTM A884/A884M	Epoxy-Coated Steel Wire and Welded Wire Fabric for Reinforcement
ASTM C94	Ready-Mixed Concrete
ASTM C1107	Packaged Dry, Hydraulic-Cement Grout (Nonshrink)

3. Precast/Prestressed Concrete Institute (PCI):

PCI MNL-116	Quality Control for Plants and Production of Precast Prestressed Concrete Products
PCI MNL-120	Design Handbook - Precast and Prestressed Concrete

4. New York State Department of Transportation (NYSDOT):

NYSDOT SS	Standard Specifications
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B. Refer to General Conditions "References and Definitions" for additional and related provisions.

1.6 QUALITY ASSURANCE

- A. Pre-casting Plant Facilities: Pre-cast Fabricator / Producer shall exhibit experience in producing precast and precast-prestressed structural concrete units with sufficient production capacity to produce required units for this Project without delaying the Work. Production shall be with quality control requirements as further specified in this Section.
- B. PCI Quality Certifications: Conform to ACI 318/318M and the PCI MNL-120. Design prestressed members for handling without cracking in accordance with the PCI MNL-120.
1. Product Quality Control: Conform to PCI MNL-116 for PCI enrolled plants. Where panels are manufactured by specialists in plants not currently enrolled in the PCI "Quality Control Program," provide a product quality control system in accordance with PCI MNL-116 and perform concrete and aggregate quality control testing using an approved, independent commercial testing laboratory. Submit test results to Commissioner.

- C. Fabrication, Sampling, and Testing: Conform to PCI MNL-116 and Division 3 Section 033129 "Marine Concrete" and requirements specified herein, whichever has the more stringent requirement for each respective test.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver precast and precast-prestressed structural concrete units to Project site in such quantities and at such times to ensure continuity of installation.
- B. Lift and support precast and precast prestressed members at the lifting and supporting points indicated on the detail shop drawings. Store precast and prestressed members off the ground. Separate stacked members by battens across the full width of each bearing point. Protect from weather, marring, damage, and overload.
- C. Handling and Storage of Epoxy Coated Steel Items:
 - 1. Provide systems for handling coated steel items which have padded contact areas, nylon slings, etc., all free of dirt and grit. Lift bundled coated items with strong back, multiple supports, or platform bridge to prevent sagging and abrasion. Bundling bands shall be padded where in contact with coated steel. Do not drop or drag coated steel items or bundles.
 - 2. Store coated steel items in shop, aboveground, on wooden or padded cribbing. Space the dunnage close enough to prevent excessive sags. Stack large quantities of straight bars with adequate protective blocking between layers. Protect from direct sunlight and weather.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

- A. Conform design of concrete mixes to Division 3 Section 033129 "Marine Concrete" and to requirements specified in Part 1 Article "Quality Assurance" herein.

2.2 MATERIALS

- A. Cement shall conform to the requirements of Division 3 Section 033129 "Marine Concrete".
 - 1. Fly Ash and Pozzolan shall conform to the requirements of Division 3 Section 033129 "Marine Concrete".
 - 2. Ground Iron Blast-Furnace Slag shall conform to the requirements of Division 3 Section 033129 "Marine Concrete".
- B. Water shall conform to the requirements of Division 3 Section 033129 "Marine Concrete".
- C. Aggregates shall conform to the requirements of Division 3 Section 033129 "Marine Concrete".

D. Grout:

1. Shear Key Grout: Conform to NYSDOT SS, Section 420.2.
2. Transverse Tendon Pocket Grout: Conform to NYSDOT SS, Section 420.3, Anchorage-Blockout Grout.
3. Setting Bed Grout shall be a cementitious grout consisting of a mixture of Portland cement, sand, and water. Proportion one-part cement to approximately 2.5 parts sand, with the amount of water based on placement method. Provide with air entrainment.

E. Admixtures shall conform to the requirements of Division 3 Section 033129 "Marine Concrete".

F. Reinforcing Steel:

1. Reinforcing Bars shall conform to the requirements of Division 3 Section 033129 "Marine Concrete". Bars shall be epoxy-coated unless otherwise noted.
2. Welded Wire Fabric: Comply with ASTM A185 or ASTM A497, coated in conformance with ASTM A884/A884M, Class A, Type 2.
3. Spiral Wire: Comply with ASTM A82, coated in conformance with ASTM A884/A884M, Class A, Type 2.
4. Ties: Conform to ASTM A615/A615M, coated in conformance with ASTM A775/A775M.
5. Prestressing Strands, Seven Wire (Stress Relieved): Comply with ASTM A416/A416M for low relaxation wire. Use prestressing steel free of grease, oil, wax, paint, soil, dirt, and loose rust. Do not use prestressing strands or wire having kinks, bends, or other defects.

G. Materials for Forms, General: Provide forms as follows and as further specified for "Formwork" in Article "Fabrication":

1. Form surfaces shall not contain irregularities, dents, or sags and shall produce a dense smooth finish. Brace forms to prevent deformation.
2. Provide forming for chamfer profiles at exposed edges of concrete piles.
3. Form ties and accessories shall not reduce the effective cover of the reinforcement.
4. Provide forms with a form treatment to prevent bond of the concrete to the form.

H. Sleeves:

1. For mooring cleat anchor bolts, sleeves shall be hot-dip galvanized pipe, Schedule 40, type conforming to ASTM A53.
2. For penetrations of conduits, pipes, and other indicated conditions, sleeves shall be PVC, Schedule 40, type conforming to provisions of ASTM D1785.

2.3 FABRICATION

A. General: Conform to PCI MNL-116, unless specified otherwise.

B. Formwork: Brace forms to prevent deformation. Forms shall produce a smooth, dense surface. Chamfer exposed edges of columns, beams and like elements 3/4 inch, unless

other detail specific to condition indicated.

1. Provide keys for deck panels as detailed on Contract Drawings.
- C. Openings: Where openings in members are required, as detailed on Contract Drawings, the openings shall be formed into the members before casting and reinforcing and prestressing steel shall pass through the opening. Reinforcing or prestressing steel in openings shall be cut on site, after installation. Holes or cuts requiring reinforcing or prestressing steel to be cut, which are not indicated on the approved detail shop drawing, shall only be made with the approval of the Commissioner and the member manufacturer. Where approved, drill holes less than 12 inches in diameter with a diamond tipped core drill.
- D. Reinforcement Placement:
1. General: Conform to ACI 318/318M for placement and splicing. Reinforcement may be preassembled before placement in forms. Provide exposed connecting bars, or other approved connection methods, between and with prestressed and cast-in-place concrete construction. Remove any excess mortar that adheres to the exposed connections. Provide curvature or drape of the prestressing strands using approved hold-down devices.
 2. For miscellaneous materials to be installed under other contracts, coordinate through Construction Manager and provide sufficient clearance between reinforcement for drilled-in bolts for railings, building columns, miscellaneous structures, equipment, devices, and the like to be installed under other separate City of New York's contract(s).
 3. Reinforcing Placement and Coating Repair: Carefully handle and install coated steel items (Rebar, Ties, Spirals, etc.) to minimize job site coating repair. Use the same precautions as described in the Part 1 Article "Delivery, Storage, and Handling" when placing reinforcement. Do not drag coated steel items over strains or over abrasive surfaces. Keep coated steel items free of dirt and grit. It is not expected that coated items, when in final position ready for concrete placement, will be completely free of damaged areas; however, excessive nicks and scrapes exceeding the limits specified by ASTM A775/A775M, which expose steel will be cause for rejection. Criteria for defects which require repair and for those that do not require repair are as indicated. Inspect for defects and provide required repairs prior to assembly. After assembly, re-inspect and provide final repairs.
 - a. Immediately prior to application of the patching material to damaged coated steel items, any rust and debonded coating shall be manually removed by suitable techniques employing devices such as wire brushes and emery paper. Care shall be exercised during this surface preparation so that the damaged areas are not enlarged more than necessary to accomplish the repair. Damaged areas shall be clean of dirt, debris, oil, and similar materials prior to application of the patching material.
 - b. Repair and patching of coated steel items bars shall be done in accordance with the patching material manufacturer's recommendations.
 - c. Allow adequate time for the patching materials to cure in accordance with the manufacturer's recommendation prior to concrete placement.
 - d. Rinse placed reinforcing bars with fresh water to remove chloride contamination

prior to placing concrete.

4. Inspect placed coated steel reinforcing for coating damage prior to placing concrete. Repair all visible damage.
- E. Inserts: When ends of prestressed member will be encased in cast-in-place concrete, extend strands as shown on Contract Drawings. When the ends of the prestressed member will be exposed, recess the prestressing stands using inserts. After detensioning, remove inserts and fill the recess with nonshrink grout.
- F. Embedments:
1. Place and secure anchors, bolts, pipe sleeves, conduits, and other such items in position before concrete placement. Plumb sleeves and anchor bolts and check location and elevation. Temporarily fill voids in sleeves with readily removable material to prevent the entry of concrete.
 2. Sleeves for mooring cleat anchors.
 3. Include embedment of Padeyes in Pile Caps as applicable.
- G. Placing and Casting Concrete: Provide concrete for precasting as specified in Article "Batching, Measuring, Mixing, and Transporting" of Division 3 Section 033129 "Marine Concrete" in addition to the following:
1. Concrete Mixing: Conform to ASTM C94. Mixing operations shall produce batch-to-batch uniformity of strength, consistency, and appearance.
 2. Concrete Placing: Conform to ACI 304R, ACI 305R for hot weather concreting, ACI 306.1 for cold weather concreting, and ACI 309R, unless otherwise specified.
 - a. Conveying: Clean conveying equipment thoroughly before each run. Convey concrete from mixer to forms as rapidly as practicable by methods that will not cause segregation or loss of ingredients. Deposit concrete as nearly as practicable to its final position. During placing, make any free vertical drop of the concrete less than 3 feet. Remove concrete which has segregated in conveying or placing.
 - b. Produce each precast concrete unit of dense concrete, straight, with smooth surfaces, and with reinforcement retained in its proper position during fabrication.
 - c. Use vibrator with heads smaller than the minimum distance between steel for pretensioning.
 3. Concrete Curing: All concrete shall be cured using the moist (wet) curing method(s) specified unless otherwise approved by Commissioner for a specific condition in accordance with the provisions herein and as specified in Part 3 Article entitled "Curing and Protection" of Division 3 Section 033129 "Marine Concrete".
 - a. Commence curing immediately following the initial set and completion of surface finishing. Provide curing procedures to keep the temperature of the concrete between 50 and 190 degrees F.

- b. When accelerated curing is used, apply heat at controlled rate and uniformly along the casting beds. Monitor temperatures at various points in a product line in different casts.
- H. Prestressing: Do not transfer prestressing forces during detensioning until the concrete has reached a minimum compressive strength of 4000 psi, unless a higher strength is required by the Contractor furnished design.
 - 1. Initial tension shall be 31kips per strand.
- I. Surface Finish: Repairs to honeycombed sections located in a bearing area shall be approved by the Commissioner prior to repairs. Prestressed members which contain honeycombed sections deep enough to expose prestressing strands shall be rejected. Members containing hairline cracks which are visible and are less than 0.02 inches in width, may be accepted. However, members which contain cracks greater than 0.02 inches in width shall be subject to approval or rejection of the Commissioner. If approved, the member shall be repaired. Any member that is structurally impaired shall be rejected.
 - 1. Unformed Surfaces: Provide a rake finish with a $\frac{1}{4}$ inch amplitude for surfaces to receive cast-in-place concrete. Provide a steel troweled finish for surfaces to remain exposed in the finished work.
 - 2. Formed Surfaces: Conform to PCI MNL-116 (Appendix A - Commentary), Chapter 3, for grades of surface finishes.
 - a. Unexposed Surfaces: Provide a commercial grade surface finish.
 - b. Exposed Surfaces: Provide a finish Grade B surface finish.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Layout and Field Survey Work: Comply with General Conditions "Execution Requirements" and additional provisions of this Section.
- B. Protection: Protect existing structures including overhead and/or buried utility lines.
- C. Precast Concrete Unit Surface Repair: Prior to erection, and again after installation, check precast and prestressed members for damage, such as cracking, spalling, and honeycombing. As directed by the Commissioner and/or Construction Manager, members that do not meet the "Surface Finish" requirements specified in Part 2 Article "Fabrication" shall be repaired, or removed and replaced with new members.

3.2 ERECTION

- A. Erect precast and prestressed members after the concrete of member has attained

the specified compressive strength, unless otherwise approved by Commissioner and the member manufacturer. In addition, prestressed members shall not be rigidly fixed in position until the prestressed member has "aged" 90 days after detensioning.

1. Erect in accordance with the approved detail shop drawings. PCI MNL-116 and PCI MNL-120 (Chapter 8) shall apply for tolerances. Provide a 1:500 tolerance, if no other tolerance is specified.
2. Brace members unless design calculations submitted with the detail shop drawings indicate bracing is not required. Follow the manufacturer's recommendations for maximum construction loads.
3. Place precast concrete members level, plumb, and square within tolerances and in accordance with the Contract Drawings. Align member ends.

3.3 BEARING SURFACES

- A. Bearing surfaces shall be flat, free of irregularities, and properly sized. Size bearing surfaces to provide for the indicated clearances between the precast or prestressed member and adjacent members or adjoining field placed surfaces.
 1. Unless otherwise indicated, set precast concrete planks on 3/8 inch bed of cementitious grout applied uniformly over the bearing surface. Concrete surfaces, of both the pile caps and the deck plank, prior to placing grout shall be moistened until damp but shall not show any standing water.
 2. Place precast and prestressed members at right angles to the bearing surface, unless indicated otherwise, and draw-up tight without forcing or distortion, with sides plumb.
 3. Correct bearing irregularities with non-shrink grout.
 4. Provide bearing pads where indicated or required.

3.4 WELDING

- A. Do not weld reinforcing or prestressing strands. Protect the concrete, reinforcing and prestressing strands from heat during welding of any adjacent structural steel components.

3.5 GROUTING

- A. Keyways: Clean and fill keyways between prestressed members solidly with grout in accordance with Section 730.5 of the Prestressed Concrete Construction Manual. Provide reinforcing where indicated. Remove excess grout before hardening.

3.6 OPENINGS

- A. If additional openings in precast concrete units are required, comply with opening requirements for fabrication in Part 2 Article "Fabrication".

3.7 CONCRETE TOPPING

- A. Concrete topping shall be provided by Contractor as indicated and specified in Division 3 Section 033129 "Marine Concrete".

END OF SECTION 03 41 00

SECTION 05 12 00

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Structural steel.
 - 2. Field-installed shear connectors.
 - 3. Grout.

1.3 DEFINITIONS

- A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.4 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at project site.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Include embedment Drawings.
 - 3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - 4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical, high-strength bolted connections.
 - 5. Identify members and connections of the Seismic-Load-Resisting System.
 - 6. Indicate locations and dimensions of protected zones.
 - 7. Identify demand critical welds.
- C. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code - Steel," for each welded joint whether prequalified or qualified by testing, including the following:
 - 1. Power source (constant current or constant voltage).
 - 2. Electrode manufacturer and trade name, for demand critical welds.
- D. Delegated-Design Submittal: For structural-steel connections indicated to comply with design loads, include analysis data signed and sealed by the qualified Professional Engineer responsible for their preparation.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, fabricator, and shop-painting applicators.
- B. Welding certificates.
- C. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
- D. Mill test reports for structural steel, including chemical and physical properties.
- E. Product Test Reports: For the following:
 - 1. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - 2. Direct-tension indicators.
 - 3. Tension-control, high-strength, bolt-nut-washer assemblies.
 - 4. Shear stud connectors.
 - 5. Shop primers.
 - 6. Nonshrink grout.
- F. Survey of existing conditions.
- G. Source quality-control reports.

- H. Field quality-control and special inspection reports.

1.8 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD, or is accredited by the IAS Fabricator Inspection Program for Structural Steel (AC 172).
- B. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category ACSE.
- C. Shop-Painting Applicators: Qualified according to AISC's Sophisticated Paint Endorsement P1 or to SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."
- D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 - 1. Welders and welding operators performing work on bottom-flange, demand-critical welds shall pass the supplemental welder qualification testing, as required by AWS D1.8/D1.8M. FCAW-S and FCAW-G shall be considered separate processes for welding personnel qualification.
- E. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.
 - 2. AISC 341 and AISC 341s1.
 - 3. AISC 360.
 - 4. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.
- B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
 - 1. Fasteners may be repackaged provided City of New York's testing and inspecting agency observes repackaging and seals containers.
 - 2. Clean and relubricate bolts and nuts that become dry or rusty before use.
 - 3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Connections: Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator, including comprehensive engineering analysis by a licensed Professional Engineer, to withstand loads indicated and comply with other information and restrictions indicated.
 - 1. Select and complete connections using schematic details indicated.
 - 2. Use Allowable Stress Design; data are given at service-load level.
- B. Moment Connections: Type PR, partially restrained.

2.2 STRUCTURAL-STEEL MATERIALS

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content as per Commissioner's guidelines.
- B. Recycled Content of Steel Products: Provide products with an average recycled content of steel products so postconsumer recycled content plus one-half of preconsumer recycled content is not less than Commissioner's guidelines.
- C. Channels, Angles, M-Shapes: ASTM A 572/A 572M, Grade 50.
- D. Plate and Bar: ASTM A 572/A 572M, Grade 50 (345).
- E. Steel Pipe: ASTM A 53/A 53M, Type E or Type S, Grade B.
 - 1. Weight Class: Standard.
 - 2. Finish: Galvanized.
- F. Welding Electrodes: Comply with AWS requirements.

2.3 BOLTS, CONNECTORS, AND ANCHORS

- A. Zinc-Coated High-Strength Bolts, Nuts, and Washers: ASTM A 307 (ASTM A 307M), Grade A, heavy-hex steel structural bolts; ASTM A 563A, Grade C, (ASTM A 563AM, Class 8S) heavy-hex carbon-steel nuts; and ASTM F 844 (ASTM F 4844M), Type 1, hardened carbon-steel washers; all with plain finish.
 - 1. Finish: Hot-dip zinc coating.
- B. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1/D1.1M, Type B.
- C. Headed Anchor Rods: ASTM F 1554, Grade 55, weldable, straight.

1. Nuts: ASTM A 563 (ASTM A 563M) heavy-hex carbon steel.
2. Plate Washers: ASTM A 36/A 36M carbon steel.
3. Washers: ASTM F 436 (ASTM F 436M), Type 1, hardened carbon steel.
4. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

D. Threaded Rods: ASTM A 722/A 722M, Grade 150 (1035).

1. Nuts: ASTM A 563 (ASTM A 563M) heavy-hex carbon steel.
2. Washers: ASTM F 436 (ASTM F 436M), Type 1, hardened carbon steel.
3. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

E. Turnbuckles: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1035.

F. Eye Bolts and Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1030.

2.4 GROUT

- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.5 FABRICATION

A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," and to AISC 360.

1. Camber structural-steel members where indicated.
2. Fabricate beams with rolling camber up.
3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
4. Mark and match-mark materials for field assembly.
5. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.

B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.

1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.

C. Bolt Holes: Cut, drill, mechanically thermal cut, or punch standard bolt holes perpendicular to metal surfaces.

D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.

E. Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 1, "Solvent Cleaning."

- F. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.
- G. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel members.
 - 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 - 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
 - 3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.6 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Snug tightened.
- B. Weld Connections: Comply with AWS D1.1/D1.1M and AWS D1.8/D1.8M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303 for mill material.

2.7 SHOP PRIMING

- A. Shop prime steel surfaces except the following:
 - 1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches (50 mm).
 - 2. Surfaces to be field welded.
 - 3. Surfaces of high-strength bolted, slip-critical connections.
 - 4. Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
 - 5. Galvanized surfaces.
 - 6. Surfaces enclosed in interior construction.
- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
 - 1. SSPC-SP 2, "Hand Tool Cleaning."
 - 2. SSPC-SP 3, "Power Tool Cleaning."
 - 3. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
 - 4. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."
 - 5. SSPC-SP 14/NACE No. 8, "Industrial Blast Cleaning."

6. SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
 7. SSPC-SP 10/NACE No. 2, "Near-White Blast Cleaning."
 8. SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning."
 9. SSPC-SP 8, "Pickling."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils (0.038 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
 2. Apply two coats of shop paint to surfaces that are inaccessible after assembly or erection. Change color of second coat to distinguish it from first.
- D. Painting: Prepare steel and apply a one-coat, nonasphaltic primer complying with SSPC-PS Guide 7.00, "Painting System Guide 7.00: Guide for Selecting One-Coat Shop Painting Systems," to provide a dry film thickness of not less than 1.5 mils (0.038 mm).

2.8 GALVANIZING

- A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.
1. Fill vent and drain holes that are exposed in the finished Work unless they function as weep holes, by plugging with zinc solder and filing off smooth.

2.9 SOURCE QUALITY CONTROL

- A. Testing Agency: Contractor to engage a qualified testing agency to perform shop tests and inspections.
1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Bolted Connections: Inspect and test shop-bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Visually inspect shop-welded connections according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
1. Liquid Penetrant Inspection: ASTM E 165.
 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 3. Ultrasonic Inspection: ASTM E 164.
 4. Radiographic Inspection: ASTM E 94.

- D. In addition to visual inspection, test and inspect shop-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Conduct tests according to requirements in AWS D1.1/D1.1M on additional shear connectors if weld fracture occurs on shear connectors already tested.
- E. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
 - 1. Prepare a certified survey of existing conditions. Include bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
 - 1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- C. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that are in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.

D. Splice members only where indicated.

E. Do not use thermal cutting during erection unless approved by the Commissioner. Finish thermally cut sections within smoothness limits in AWS D1.1/D1.1M.

F. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

G. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.

3.4 FIELD CONNECTIONS

A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.

1. Joint Type: Snug tightened.

B. Weld Connections: Comply with AWS D1.1/D1.1M and AWS D1.8/D1.8M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
2. Remove backing bars or runoff tabs where indicated, back gouge, and grind steel smooth.
3. Assemble and weld built-up sections by methods that maintain true alignment of axes without exceeding tolerances in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," for mill material.

3.5 PREFABRICATED BUILDING COLUMNS

A. N/A

3.6 FIELD QUALITY CONTROL

A. Special Inspections: Special Inspections are performed by the City of New York.

B. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

C. Bolted Connections: Inspect and test bolted connections according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

- D. Welded Connections: Visually inspect field welds according to AWS D1.1/D1.1M.
 - 1. In addition to visual inspection, test and inspect field welds according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration are not accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.
- E. In addition to visual inspection, test and inspect field-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Conduct tests according to requirements in AWS D1.1/D1.1M on additional shear connectors if weld fracture occurs on shear connectors already tested.

3.7 REPAIRS AND PROTECTION

- A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780/A 780M.
- B. Touchup Painting: Immediately after erection, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
 - 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.

END OF SECTION 05 12 00

SECTION 26 56 00

EXTERIOR LIGHT POLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Exterior luminaires with lamps and ballasts.
 - 2. Luminaire-mounted/Pole-mounted photovoltaic modules.
 - 3. Poles and accessories.
 - 4. Battery Assembly.

1.3 REFERENCES

- A. International Electro-technical Commission (IEC)
- B. American Society of Testing Materials (ASTM)
- C. ISO 9001
- D. Illumination Engineering Society of North America (IES)
- E. American Association of State Highway and Transportation Officials (AASHTO)
- F. National Electrical Manufacturers Association (NEMA)
 - 1. Luminaires (ANSI C136.37, .31)
 - 2. Poles (C136.36)
 - 3. Battery enclosure (NEMA 4X)
 - 4. Offgrid solar lighting system (C136.40)
- G. National Electrical Code (NEC)
- H. NRTL listing (eg UL, CSA, ETL)
 - 1. PV module (UL1703)

2. Charge controller (UL1741)
3. Batteries (UL file MH 20845)
4. Light pole CSA Std. C22.2 No. 206-M1987 (R2004)
5. Luminaire (UL1598) or (UL2108)

1.4 DEFINITIONS

- A. CRI: Color-rendering index.
- B. LED: Light Emitting Diode.
- C. Luminaire: Complete lighting fixture, including ballast housing if provided.
- D. Pole: Luminaire support structure, including tower used for large area illumination.
- E. Standard: Same definition as "Pole" above.

1.5 STRUCTURAL ANALYSIS CRITERIA FOR POLE SELECTION

- A. Dead Load: Weight of luminaire and its horizontal and vertical supports, lowering devices, and supporting structure, applied as stated in AASHTO LTS-4.
- B. Live Load: Single load of 500 lbf, distributed as stated in AASHTO LTS-4.
- C. Ice Load: Load of 3 lbf/sq. ft. applied as stated in AASHTO LTS-4.
- D. Wind Load: Pressure of wind on pole and luminaire, calculated and applied as stated in AASHTO LTS-4.
 1. Wind speed for calculating wind load for poles 50 feet or less in height is 120 mph.

1.6 SUBMITTALS

- A. Product Data: For each luminaire, pole, and support component, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:
 1. Physical description of luminaire, including materials, dimensions, effective projected area, and verification of indicated parameters.
 2. Details of attaching luminaires and accessories.
 3. Details of installation and construction.
 4. Luminaire materials.
 5. Photometric data based on laboratory tests of each luminaire type, complete with indicated lamps, ballasts, and accessories.
 - a. Provide photometric files on a CD with original file name prefixed by the fixture type and a hyphen, i.e., A-32214.ies.

- b. Photometric data shall be certified by a qualified independent testing agency or by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
6. Photovoltaic panels.
7. Battery Assembly enclosure details and mounting .
8. Battery Assembly.
9. Ballast: Provide separate list, keyed to fixture type indicating manufacturer, catalog number, ballast type, ballast factor, input wattage, voltage and energy-efficiency data.
10. Lamps: Provide separate list, keyed to fixture type, indicating manufacturer, catalog number, voltage, color temperature, life, output, and energy-efficient data.
11. Materials, dimensions, and finishes of poles.
12. Means of attaching luminaires to supports, and indication that attachment is suitable for components involved.
13. Anchor bolts for poles.
14. "Days of Storage" battery capacity calculation will be based on an assumption of no sun and will show Battery cycle life using manufacturer's cycle life vs. average daily depth of discharge in the worst-case month. Estimates must take into account effect of temperature on cycle life.
15. Worst case (winter) average PV panel amp-hour production to specific worst case amp-hour load ratio (Array-to-Load Ratio). Calculations of Array-to-Load shall be based on the lowest average irradiance data from an accredited source (e.g. NREL TMY2), with an additional de-rating factor of 0.73 to account for worst-case conditions. Calculation should also take into account other aspects that could affect PV panel output, including temperature, shading, snow or dust coverage and sub-optimal orientation.
16. LM-80 data demonstrating lumen maintenance vs time and TM-21 projections to show how luminaire meets or exceeds lifetime goals.
17. Detailed Site Analysis (includes shading analysis of solar poles and photometric analysis of lighting requirements). The solar lighting manufacturer shall provide the site analysis to ensure project success.

This analysis shall include:

- a. Design factors: Location of site, location of poles within the site, identification of foot candle requirements for lighting application, lighting layout and associated photometric analysis to ensure foot candle requirements are met, type of solar poles, number of poles in project
- b. Observations and Recommendations: Shading issues due to obstruction, future tree growth or other possible future obstructions will be addressed and recommendations will be made to avoid these issues and ensure a reliable lighting system.
- c. Three dimensional pictures of the site and poles simulating the sun's movement on the worst day of the year
- d. Video report of the sun's path and how it affects the poles on the worst day of the year. This detailed model simulates the sun's path based on time of year, position of the Earth and location of the installation site.

18. Site lighting layout with photometry certified to IES LM-79 at initial lumens meeting or exceeding initial horizontal illuminance values. The lighting layout will meet the appropriate IES standard, or the specs required by the customer.
 19. Manufactured pole foundations.
 20. Product specification sheets
 21. Warranty information for entire system
- B. Shop Drawings:
1. Anchor-bolt templates keyed to specific poles and certified by manufacturer.
 2. Design calculations, certified by a qualified professional engineer, indicating strength of screw foundations and soil conditions on which they are based.
 3. Wiring Diagrams: Power and control wiring.
 4. Installation Instructions
- C. Pole and Support Component Certificates: Signed by manufacturers of poles, certifying that products are designed for indicated load requirements in AASHTO LTS-4 and that load imposed by luminaire has been included in design.
- D. Qualification Data: For agencies providing photometric data for lighting fixtures.
- E. Field quality-control test reports.
- F. Operation and Maintenance Data: For luminaires and poles to include operation, and maintenance manuals.
- G. Warranty: Special warranty specified in this Section.

1.7 QUALITY ASSURANCE

- A. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by manufacturers' laboratories that are accredited under the National Volunteer Laboratory Accreditation Program for Energy Efficient Lighting Products.
- B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7.
- C. 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.
- D. Comply with IEEE C2, "National Electrical Safety Code."
- E. Comply with NFPA 70.
- F. Manufacturer shall have a minimum of 3 years experience in the design of photovoltaic lighting systems.

- G. Solar Panels shall be IEC 61215 or IEEE 1262 listed and/or UL 1703 listed.
- H. Luminaires should be UL listed, IP66 or better rating.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Package aluminum poles for shipping according to ASTM B 660.
- B. Store poles on decay-resistant-treated skids at least 12 inches above grade and vegetation. Support poles to prevent distortion and arrange to provide free air circulation.
- C. Retain factory-applied pole wrappings on metal poles until right before pole installation. For poles with nonmetallic finishes, handle with web fabric straps.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.
 - 1. Warranty Period for Luminaires: Five years from date of Substantial Completion.
 - 2. Warranty Period for Metal Corrosion: Five years from date of Substantial Completion.
 - 3. Warranty Period for Color Retention: Five years from date of Substantial Completion.
 - 4. Warranty Period for Lamps: Replace lamps and fuses that fail within 24 months from date of Substantial Completion; furnish replacement lamps and fuses that fail within the next 12 months after the first 24 months.
 - 5. Warranty Period for Poles: Repair or replace lighting poles and standards that fail in finish, materials, and workmanship within manufacturer's standard warranty period, but not less than three years from date of Substantial Completion.
 - 6. Warranty of batteries shall be pro-rated as follows:
 - a. 0 to 2 years: 100% credit (i.e., Purchaser pays 0% of the replacement battery price)
 - b. 2 to 3 years: 60% credit (i.e., Purchaser pays 40% of the replacement battery price)
 - c. 3 to 4 years: 40% credit (i.e., Purchaser pays 60% of the replacement battery price)
 - d. 4 to 5 years: 20% credit (i.e., Purchaser pays 80% of the replacement battery price)

PART 2 - PRODUCTS

2.1 LUMINAIRES, GENERAL REQUIREMENTS

- A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.

- B. Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.
- C. Metal Parts: Free of burrs and sharp corners and edges.
- D. Sheet Metal Components: Corrosion-resistant aluminum, unless otherwise indicated. Form and support to prevent warping and sagging.
- E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.
- G. Exposed Hardware Material: Stainless steel.
- H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
- I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.
- J. Reflecting surfaces shall have minimum reflectance as follows, unless otherwise indicated:
 - 1. White Surfaces: 85 percent.
 - 2. Specular Surfaces: 83 percent.
 - 3. Diffusing Specular Surfaces: 75 percent.
- K. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.
- L. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.
- M. Factory-Applied Finish for Steel Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
 - 2. Exterior Surfaces: Manufacturer's standard finish consisting of one or more coats of primer and two finish coats of high-gloss, high-build polyurethane enamel.

- a. Color: As selected from manufacturer's standard catalog of colors.

N. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

- 1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- 2. Class I, Clear Anodic Finish: AA-M32C22A41 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.

2.2 LUMINAIRE-MOUNTED PHOTOELECTRIC RELAYS

- A. Operation of the luminaire shall be via the Photovoltaic panel and controller.

2.3 PHOTOVOLTAIC PANELS

- A. PV lighting system shall be rated to operate in an ambient temperature range of -29°C (-20°F) and 60°C (140°F) and up to 100% relative humidity.
- B. All Electronic components shall be rated for between -29°C (-20°F) and 60°C (140°F) or better.
- C. PV module, mounting system, pole and footing must be rated for local wind loading conditions, as an entire system with luminaire and any battery/controller system that is attached to the pole. Structural calculations for pole must take into account EPA and weight of PV panel and mount, luminaire and arm, and battery/controller compartment.

PV module must withstand Hailstone impact described in ASTM E1038-93 and Surface Cut Susceptibility tests (UL 1703-24)

2.4 BATTERY SYSTEM

- A. Batteries shall be sealed dry-type and classified as deep cycle by the manufacturer.
- B. The battery system enclosure must be rated NEMA 4X and be enclosed and ventilated.

2.5 CONTROLLERS

- A. The lighting controller shall be capable of reading the ambient light from a photo sensing device or solar panel and determining when to turn the light on or off. The lighting controller shall have the ability to monitor the State of Charge (SOC) left in the battery system and adopt certain energy savings modes to lengthen the time the system can keep the luminaire on through consecutive cloudy days. The lighting controller shall have intelligence to protect the batteries against overcharging, over-discharging and permanent sulfation. The lighting controller

enclosure shall be NEMA 4X rated to protect against harsh environmental conditions. The lighting controller shall have programmable lighting profiles to optimize the amount of light vs the battery capacity and state of charge. The charge controller shall have four stages of charge control (bulk, absorption, float, and equalization) to prevent overcharging and to keep the batteries in peak condition. The charge controller shall have a Low Voltage Disconnect (LVD) to prevent damage to the batteries that can occur if they are cycled too deeply. The charge controller also has a Low Voltage Reconnect (LVR) to ensure that the batteries have been charged to a high enough level so that the batteries do not continue to reside in a deep cycled state. The charge controller shall have electronic protections against overloads, short circuits, high voltage, reverse polarity connections, lightening and transient surges, and high temperature. The charge controller shall have temperature compensation during charging to prevent damage to the batteries and to optimize the charging at over temperature extremes. The charge controller shall be made to withstand extreme environments and marine rated terminals. The charge controller shall have programmability for thresholds of charging states, temperature compensation, and battery LED indicators.

- B. The Lighting Controller and Charge Controller shall exhibit the following characteristics:
1. Dusk/Dawn On/Off: Ambient light photo sensor; intelligent algorithms
 2. Power Management: Time dependent dimming and brightening (programmable)
 3. Autonomy Management: Energy saving modes based on SOC of batteries
 4. Environmental Protection: NEMA 4X; Marine rated terminals. Corrosive Resistant for Harsh Environments
 5. Battery Protection: State of charge detection and smart controls
 6. Charging Method: Four-stage intelligent charging
 7. Wiring/Connections: Color coded marine wiring and terminals
 8. Safety Features: LVD, LVR, multiple electronic protections,
 9. Other: 30 days running data logging
 10. Warranty: 5 years

2.6 POLES AND SUPPORT COMPONENTS, GENERAL REQUIREMENTS

- A. Structural Characteristics: Comply with AASHTO LTS-4.
1. Wind-Load Strength of Poles: Adequate at indicated heights above grade without failure, permanent deflection, or whipping in steady winds of speed indicated in Part 1 "Structural Analysis Criteria for Pole Selection" Article, with a gust factor of 1.3.
 2. Strength Analysis: For each pole, multiply the actual equivalent projected area of luminaires and brackets by a factor of 1.1 to obtain the equivalent projected area to be used in pole selection strength analysis.
- B. Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts, unless otherwise indicated.
- C. Mountings, Fasteners, and Appurtenances: Corrosion-resistant items compatible with support components.
1. Materials: Shall not cause galvanic action at contact points.

2. Anchor Bolts, Leveling Nuts, Bolt Caps, and Washers: Hot-dip galvanized after fabrication, unless stainless-steel items are indicated.
 3. Anchor-Bolt Template: Plywood or steel.
- D. Concrete Pole Foundations: Pre-cast, with anchor bolts to match pole-base flange. Provide pre-cast foundation as recommended by the manufacturer.
- E. Power-Installed Screw Foundations: Factory fabricated by pole manufacturer, with structural steel complying with ASTM A 36/A 36M and hot-dip galvanized according to ASTM A 123/A 123M; and with top-plate and mounting bolts to match pole base flange and strength required to support pole, luminaire, and accessories.
- F. Breakaway Supports: Frangible breakaway supports, tested by an independent testing agency acceptable to authorities having jurisdiction, according to AASHTO LTS-4.

2.7 STEEL POLES

- A. Poles: Comply with ASTM A 500, Grade B, carbon steel with a minimum yield of 46,000 psig (317 MPa); 1-piece construction up to 40 feet (12 m) in height with access handhole in pole wall.
1. Mounting Provisions: Butt flange for bolted mounting on foundation or breakaway support.
- B. Steel Mast Arms: Single-arm type, continuously welded to pole attachment plate. Material and finish same as pole.
- C. Brackets for Luminaires: Detachable, cantilever, without underbrace.
1. Adapter fitting welded to pole and bracket, then bolted together with stainless steel bolts.
 2. Cross Section: Tapered oval, with straight tubular end section to accommodate luminaire.
 3. Match pole material and finish.
- D. Pole-Top Tenons: Fabricated to support luminaire or luminaires and brackets indicated, and securely fastened to pole top.
- E. Steps: Fixed steel, with nonslip treads, positioned for 15-inch (381-mm) vertical spacing, alternating on opposite sides of pole; first step at elevation 10 feet (3 m) above finished grade.
- F. Grounding and Bonding Lugs: Welded 1/2-inch threaded lug, complying with requirements in the NYC Electrical Code listed for attaching grounding and bonding conductors of type and size listed in that Section, and accessible through handhole.
- G. Cable Support Grip: Wire-mesh type with rotating attachment eye, sized for diameter of cable and rated for a minimum load equal to weight of supported cable times a 5.0 safety factor.

- H. Platform for Lamp and Ballast Servicing: Factory fabricated of steel with finish matching that of pole.
- I. Prime-Coat Finish: Manufacturer's standard prime-coat finish ready for field painting.
- J. Factory-Painted Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or SSPC-SP 8, "Pickling."
 - 2. Interior Surfaces of Pole: One coat of bituminous paint, or otherwise treat for equal corrosion protection.
 - 3. Exterior Surfaces: Manufacturer's standard finish consisting of one or more coats of primer and two finish coats of high-gloss, high-build polyurethane enamel.
 - a. Color: As selected by Commissioner from manufacturer's full range.

2.8 ALUMINUM POLES

- A. Poles: Seamless, extruded structural tube complying with ASTM B 429, Alloy 6063-T6 with access handhole in pole wall.
- B. Poles: ASTM B 209 (ASTM B 209M), 5052-H34 marine sheet alloy with access handhole in pole wall.
 - 1. Mounting Provisions: Butt flange for bolted mounting on foundation or breakaway support.
- C. Pole-Top Tenons: Fabricated to support luminaire or luminaires and brackets indicated, and securely fastened to pole top.
- D. Grounding and Bonding Lugs: Welded 1/2-inch (13-mm) threaded lug, complying with requirements in Division 26 Section "Grounding and Bonding for Electrical Systems," listed for attaching grounding and bonding conductors of type and size listed in that Section, and accessible through handhole.
- E. Brackets for Luminaires: Detachable, with pole and adapter fittings of cast aluminum. Adapter fitting welded to pole and bracket, then bolted together with stainless-steel bolts.
 - 1. Tapered oval cross section, with straight tubular end section to accommodate luminaire.
 - 2. Finish: Same as luminaire.
- F. Prime-Coat Finish: Manufacturer's standard prime-coat finish ready for field painting.
- G. Aluminum Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
2. Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20; and seal aluminum surfaces with clear, hard-coat wax.
3. Class I, Clear Anodic Finish: AA-M32C22A41 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.
4. Class I, Color Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.

2.9 REQUIREMENTS FOR INDIVIDUAL EXTERIOR LIGHTING DEVICES

A. Exterior Light Pole:

Should there be a deviation in any of the characteristics described below the contractor shall submit a light fixture layout clearly indicating that the fixture being provided will provide the required lighting distribution as outlined below.

1. Basis-of-Design Product: SEPCO, Model: Viper Luminaire with SEPA340-Q Solar assembly on 25-foot pole or a comparable product by one of the following manufacturers:
 - a. Inovus
 - b. Lumisolair
2. Voltage: 12-24 VDC, capable of functioning with the solar light panel.
3. Nominal Dimensions: 25 foot tall pole and approximately 4 foot extension armature.
4. Lamps: LED array
5. Features: Integral pole mounted controller
6. Photoelectric Control: Integral to solar assembly.
7. IESNA Lateral Distribution Class: IV.
8. IESNA Cutoff Category: Semicutoff.
9. Nominal Beam Spread for Floodlights: 40 degrees Horizontal by 67.5 degrees Vertical (See Appendix A.10)
10. Photometric Performance of Installed Units:
 - a. Spot Intensity: Minimum initial horizontal illumination at grade shall be 0.4 fc at a point indicated on the attached plan (See Appendix A.10).
 - b. Average Intensity: Minimum average initial horizontal illumination at grade in the illuminated area shall be 1 fc.
 - c. Uniformity: For a spacing between adjacent fixtures in parallel rows of 95 feet, fixture to fixture and row to row, the maximum-to-minimum initial horizontal

- point illumination between any pair of adjacent lighting units, including those in parallel rows, shall be not greater than 1:4.25
- d. Cutoff: Maximum initial horizontal illumination shall not exceed 1.7 fc at a point indicated on the attached plan (See Appendix A.10).
- 11. Minimum Luminaire Efficacy Rating: 93
 - 12. Pole Description:
 - a. Material or Type: Steel or Aluminum.
 - b. Luminaire Support Components and Accessories: Mast arms, Metal pole bracket, Grounding and bonding lug.
 - c. Mounting Provisions: Concrete foundation.

PART 3 - EXECUTION

3.1 LUMINAIRE INSTALLATION

- A. Install lamps in each luminaire.
- B. Fasten luminaire to indicated structural supports.
 - 1. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.
- C. Adjust luminaires that require field adjustment or aiming. Include adjustment of photoelectric device to prevent false operation of relay by artificial light sources.
 - 1. Target and focus after regular working hours and before building acceptance.
 - 2. Permanently indicate targeting on fixture and provide positive locking devices to preclude mis-focus during relamping.
 - 3. Target and focus in the presence of the Architect and Lighting Designer.

3.2 POLE INSTALLATION

- A. Align pole foundations and poles for optimum directional alignment of luminaires and their mounting provisions on the pole.
- B. Clearances: Maintain the following minimum horizontal distances of poles from surface and underground features, unless otherwise indicated on Drawings:
 - 1. Fire Hydrants and Storm Drainage Piping: 60 inches (1520 mm).
 - 2. Water, Gas, Electric, Communication, and Sewer Lines: 10 feet (3 m)
 - 3. Trees: 15 feet (5 m).
- C. Concrete Pole Foundations: Set anchor bolts according to anchor-bolt templates furnished by pole manufacturer. Provide precast foundations as recommended by manufacturer.

- D. **Foundation-Mounted Poles:** Mount pole with leveling nuts, and tighten top nuts to torque level recommended by pole manufacturer.
 - 1. Use anchor bolts and nuts selected to resist seismic forces defined for the application and approved by manufacturer.
 - 2. Grout void between pole base and foundation. Use nonshrink or expanding concrete grout firmly packed to fill space.
 - 3. Install base covers, unless otherwise indicated.
 - 4. Use a short piece of 1/2-inch diameter pipe to make a drain hole through grout. Arrange to drain condensation from interior of pole.
- E. **Poles and Pole Foundations Set in Concrete Paved Areas:** Install poles with minimum of 6-inch- (150-mm-) wide, unpaved gap between the pole or pole foundation and the edge of adjacent concrete slab. Fill unpaved ring with pea gravel to a level 1 inch (25 mm) below top of concrete slab.
- F. **Raise and set poles using web fabric slings (not chain or cable).**

3.3 CORROSION PREVENTION

- A. **Aluminum:** Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.

3.4 GROUNDING

- A. **Ground metal poles and support structures according to the 2011 New York City Electrical Code.**
 - 1. Install grounding electrode for each pole, unless otherwise indicated.
 - 2. Install grounding conductor pigtail in the base for connecting luminaire to grounding system.

3.5 FIELD QUALITY CONTROL

- A. **Inspect each installed fixture for damage. Replace damaged fixtures and components.**
- B. **Illumination Observations:** Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source.
 - 1. Verify operation of photoelectric controls.
- C. **Illumination Tests:**
 - 1. Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IESNA testing guide(s):
 - a. IESNA LM-50, "Photometric Measurements of Roadway Lighting Installations."

- D. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

END OF SECTION 26 56 00

SECTION 31 20 00

EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Preparing subgrades for crushed stone surface.
2. Excavating and backfilling for buildings and structures.
3. Subsurface drainage backfill for walls and trenches.

B. Related Sections:

1. General Conditions "Construction Progress Documentation", and "Photographic Documentation" for recording preexcavation and earth moving progress.
2. Section 033000 "Cast-in-Place Concrete" for granular course if placed over vapor retarder and beneath the slab-on-grade.
3. Section 311000 "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
4. Section 315000 "Excavation Support and Protection" for shoring, bracing, and sheet piling of excavations.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

- E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by the Commissioner. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Bulk Excavation: Excavation more than 10 feet (3 min width and more than 30 feet (9 m) in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by the Commissioner. Unauthorized excavation, as well as remedial work directed by the Commissioner, shall be without additional compensation.
- G. Fill: Soil materials used to raise existing grades.
- H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. (0.76 cu. m) for bulk excavation or 3/4 cu. yd. (0.57 cu. m) for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
 - 1. Excavation of Footings, Trenches, and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- (1065-mm-) wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp (103-kW) flywheel power with bucket-curling force of not less than 28,700 lbf (128 kN) and stick-crowd force of not less than 18,400 lbf (82 kN) with extra-long reach boom; measured according to SAE J-1179.
 - 2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 230-hp (172-kW) flywheel power and developing a minimum of 47,992-lbf (213.3-kN) breakout force with a general-purpose bare bucket; measured according to SAE J-732.
- I. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. (0.57 cu. m) or more in volume that exceed a standard penetration resistance of 100 blows/2 inches (97 blows/50 mm) when tested by a geotechnical testing agency, according to ASTM D 1586.
- J. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- K. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

- L. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- M. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
 - 1. Geotextiles.
 - 2. Controlled low-strength material, including design mixture.
 - 3. Warning tapes.
- B. Samples for Verification: For the following products, in sizes indicated below:
 - 1. Geotextile: 12 by 12 inches (300 by 300 mm).
 - 2. Warning Tape: 12 inches (300 mm) long; of each color.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:
 - 1. Classification according to ASTM D 2487.
 - 2. Laboratory compaction curve according to ASTM D 1557.
- C. Seismic survey report from seismic survey agency.
- D. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

1.6 QUALITY ASSURANCE

- A. Blasting: Comply with applicable requirements in NFPA 495, "Explosive Materials Code," and prepare a blasting plan reporting the following:
 - 1. Types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties.
 - 2. Seismographic monitoring during blasting operations.
- B. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.

- C. Preexcavation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from City of New York and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by City of New York or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining City of New York's property will be obtained by City of New York before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by the Commissioner.
- C. Utility Locator Service: Notify "Dig Safe System" for area where Project is located before beginning earth moving operations.
- D. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in General Conditions "Temporary Facilities, Services, and Controls" are in place.
- E. The following practices are prohibited within protection zones:
 - 1. Storage of construction materials, debris, or excavated material.
 - 2. Parking vehicles or equipment.
 - 3. Foot traffic.
 - 4. Erection of sheds or structures.
 - 5. Impoundment of water.
 - 6. Excavation or other digging unless otherwise indicated.
 - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- F. Do not direct vehicle or equipment exhaust towards protection zones.
- G. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

- B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, or a combination of these groups; free of rock or gravel larger than 3 inches (75 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
 - 1. Liquid Limit: As per Commissioner's guidelines
 - 2. Plasticity Index: As per Commissioner's guidelines.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
 - 1. Survivability: As indicated
 - 2. Grab Tensile Strength: As indicated.
 - 3. Sewn Seam Strength: As indicated.
 - 4. Tear Strength: As indicated.
 - 5. Puncture Strength: As indicated.
 - 6. Apparent Opening Size: As indicated.
 - 7. Permittivity: As indicated.
 - 8. UV Stability: As indicated.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches (600 mm) outside of concrete forms other than at footings.
- B. Classified Excavation: Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock. Do not excavate rock until it has been classified and cross sectioned by the Commissioner. The Contract Sum will be adjusted for rock excavation according to unit prices included in the Contract Documents. Changes in the Contract Time may be authorized for rock excavation.
 - 1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
 - 2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches (600 mm) outside of concrete forms other than at footings.

3.4 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
 - 2. Pile Foundations: Stop excavations 6 to 12 inches (150 to 300 mm) above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.
 - 3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch (25 mm). Do not disturb bottom of excavations intended as bearing surfaces.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.6 SUBGRADE INSPECTION

- A. Notify the Commissioner when excavations have reached required subgrade.
- B. If the Commissioner determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes) to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction. Limit vehicle speed to 3 mph (5 km/h).
 - 2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by the Commissioner, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by the Commissioner, without additional compensation.

3.7 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by the Commissioner.
 - 1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by the Commissioner.

3.8 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations.

3.9 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.10 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under steps and ramps, use engineered fill.
 - 4. Under building slabs, use engineered fill.
 - 5. Under footings and foundations, use engineered fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.11 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches (200 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
 - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 95 percent.

3.13 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Turf or Unpaved Areas: Plus or minus 1 inch (25 mm).

3.14 SUBSURFACE DRAINAGE

- A. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 6-inch (150-mm) course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 12 inches (300 mm) of

filter material, placed in compacted layers 6 inches (150 mm) thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).

1. Compact each filter material layer to 85 percent of maximum dry unit weight according to ASTM D 698 with a minimum of two passes of a plate-type vibratory compactor.
- B. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches (300 mm) of final subgrade, in compacted layers 6 inches (150 mm) thick. Overlay drainage backfill with one layer of subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).
1. Compact each filter material layer to 85 percent of maximum dry unit weight according to ASTM D 698 with a minimum of two passes of a plate-type vibratory compactor.
 2. Place and compact impervious fill over drainage backfill in 6-inch- (150-mm-) thick compacted layers to final subgrade.

3.15 FIELD QUALITY CONTROL

- A. Special Inspections: City of New York will engage a qualified special inspector to perform the following special inspections:
1. Determine prior to placement of fill that site has been prepared in compliance with requirements.
 2. Determine that fill material and maximum lift thickness comply with requirements.
 3. Determine, at the required frequency, that in-place density of compacted fill complies with requirements.
- B. Testing Agency: City of New York will engage a qualified geotechnical engineering testing agency to perform tests and inspections.
- C. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- D. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by the Commissioner.
- E. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
1. Foundation Wall Backfill: At each compacted backfill layer, at least one test for every 100 feet (30 m) or less of wall length, but no fewer than two tests.
 2. Trench Backfill: At each compacted initial and final backfill layer, at least one test for every 150 feet (46 m) or less of trench length, but no fewer than two tests.

- F. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.16 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by the Commissioner; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.17 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Transport surplus satisfactory soil to designated storage areas on City of New York's property. Stockpile or spread soil as directed by the Commissioner.
 - 1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off City of New York's property.

END OF SECTION 31 20 00

[No Text on This Page]

SECTION 31 22 00
SITE GRADING

PART 1 - GENERAL

1.01 APPLICABLE REQUIREMENTS

- A. The Contract Drawings, and all other specification sections and other general conditions apply to this section.
- B. All work performed by the Contractor under this contract shall comply with all applicable Federal, State and Local codes, laws, ordinances, regulations and guidelines for demolition work.

1.02 DESCRIPTION

- A. Work in this Section shall consist of the general site grading with on site material to provide drainage and safe conditions utilizing on-site material as a result of demolition work and off-site material as directed by the Resident Engineer as specified in Section 31 23 00.

PART 2 - MATERIALS

See Sections 31 23 00 for material requirements.

PART 3 - EXECUTION

3.01 SITE GRADING

- A. The entire area of the site previously occupied by the buildings and pavement shall be graded to permit surface drainage as shown on the Contract Drawings.
- B. The Contractor shall match the existing grades at the limit of demolition line.

3.02 COMPACTION

- A. Any fill placed during general site grading shall be satisfactorily placed in maximum 12-inch-thick lifts and compacted and sealed using a 5-ton static drum weight vibratory roller in accordance with Section 31 23 00 of these specifications. A minimum of 6 passes shall be made with the roller in a uniform and discernable pattern. Any "soft spots" observed shall be excavated by the Contractor to competent material and filled with compacted fill.

3.03 POLLUTION CONTROLS

A. DUST

During grading operations, the Contractor shall, when necessary, use water sprinkling and other suitable methods to minimize the amount of dust and dirt rising into the air to the lowest practical level possible. The Contractor shall not use water when dangerous icing or flooding, may occur. The Contractor shall comply with all governing regulations pertaining to

environmental protection, soil erosion and dust control and install and maintain all control measures indicated on the plans.

B. NOISE

The Contractor shall make all attempts necessary to reduce noise emissions from the site during demolition operations. Noise levels shall be maintained at or below State standards.

END OF SECTION

**SECTION 31 23 00
BACKFILL OF BUILDING AND UTILITY REMOVAL AREAS**

PART 1 - GENERAL

1.01 APPLICABLE REQUIREMENTS

- A. The Contract Drawings, and all other specification sections and other general conditions apply to this section.
- B. All work performed by the Contractor under this Contract shall comply with all applicable Federal, State and Local codes, laws, ordinances, regulations and guidelines for demolition work.

1.02 DESCRIPTION OF WORK

- A. The Contractor shall be responsible for constructing controlled, compacted backfill in the building foundation and utility removal areas, to provide proper drainage and safe site conditions as directed by the Commissioner. The Contractor is also responsible to remove and properly and legally dispose of the existing fill material, including, but not limited to, soil, asphalt, cobblestones, concrete base and all previous building foundations, to a depth of five feet throughout the building footprints and site within the landward limit of demolition line. The only exception would be in any areas where groundwater is encountered. However, the Contractor shall make every effort to coordinate the excavation operations where groundwater is encountered with the low tide fluctuations to provide the maximum removal area.
- B. The Contractor shall backfill the site with the coarse sand described in the Contract Drawings and below to replace the excavated existing material to an elevation 9 inches below the final surface grades. The Contractor shall then install the crushed stone/gravel described in the following section above the coarse sand material in the top 9 inches of the final surface.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Imported fill materials described below shall be free of wood, metal and the other deleterious materials. The material shall be environmentally clean and contain no contamination in exceedence of New York State DEC cleanup objectives as referenced in "CP-51 Soil Cleanup Guidance Policy". The Contractor shall furnish certification of compliance to the Commissioner no less than two weeks prior to its intended use.
- B. The Contractor shall notify the Commissioner of the proposed borrow source and shall deliver a 50 lb sample of each material to the Commissioner at least one week prior to the use of the material to permit inspection and laboratory testing of the material to establish field density criteria.

C. IMPORTED COARSE SAND MATERIAL

- 1. Coarse Sand material shall be a naturally occurring, manufactured, uniformly graded coarse sand consisting of clean, inert, rounded grains of quartz or other durable rock and free from loam or clay, surface coatings, mica, other deleterious materials. Coarse Sand material shall comply with the following gradation for material passing a Number 10 Sieve for washed sieving:

<u>U.S. Sieve Size No.</u>	<u>% Passing Minimum</u>	<u>% Passing Maximum</u>
10	100	-
18	50	80

35	20	45
60	8	20
140	0	8
270	0	3
0.002mm	0	0.3

- a. Maximum size shall be one-inch (1") largest dimension. The maximum retained on the #10 sieve shall be 20% by weight of the total sample.
- b. The ratio of the particle size for 70% passing (D70) to the particle size for 20% passing (D20) shall be 3.0 or less ($D70/D20 \leq 3.0$).
- c. Tests shall be by combined hydrometer and wet sieving in compliance with ASTM D422. Test results shall be submitted for both percent (%) retained and percent (%) passing for all sieve sizes.

D. GRAVEL/CRUSHED STONE

1. Crushed Stone shall consist of washed, clean, hard, durable crushed rock consisting of angular fragments obtained by breaking and crushing solid or shattered natural rock free from loam, clay, or mica. Material shall be free (one percent maximum) from a detrimental quantity of flat, elongated (where average width exceeds 4 times the average thickness) pieces, or other objectionable pieces. Material shall also be free of recycled materials such as concrete, masonry, glass, ceramics, etc.
2. Crushed Stone shall have the following gradation as determined by ASTM Designation C33, No. 8 Gradation:

<u>Passing Sieve</u>	<u>Percent Passing by Weight</u>
1 inch	95 - 100
¾ inch	85 - 100
½ inch	25 - 60
3/8 inch	5 - 20
No. 4	0 - 10
No. 8	0 - 5

3. Provide processed crushed stone material obtained from off-site sources.

PART 3 - EXECUTION

3.01 METHOD OF CONSTRUCTION

- A. Prior to placing the backfill material, all building foundations, foundation walls and floor slabs must be removed and all steel reinforcement, pavements, walls, sewers, utilities, utility/sewer appurtenances, etc. shall be removed in their entirety unless otherwise noted to remain in the Contract Drawings. Where backfill is to be placed, the subgrade area shall be compacted with a minimum of 6 passes by a minimum 5 ton static drum weight vibratory roller such as BOMAG BW 210 or equivalent; the subgrade within utility removal areas shall be compacted with a minimum of 8 passes of a double drum walk behind vibratory roller such as BOMAG BW 65 or equivalent.
- B. Any subgrade material rutting or weaving under the compaction equipment shall be removed and replace with properly compacted backfill. The subgrade shall be free of standing water and unsaturated. If necessary, dewatering of localized areas may be required and shall be performed by the Contractor at no additional cost to the City of New York for backfilling of foundation, etc. elements. All unsuitable material and deleterious matter shall be removed from the excavation prior to placement of fill.

- C. Placement of backfill material shall not proceed until the Commissioner has observed and approved the subgrade, or the underlying layer of compacted fill. Backfill material should only be placed after the Contractor has installed a nonwoven medium weight geotextile fabric, such as Mirafi 160N, or approved equivalent to separate the subgrade from the backfill material.
- D. The Contractor shall completely fill below grade areas and voids resulting from the building demolition. For mass backfilling, the fill material shall be spread in loose lifts a maximum of 12 inches thick and each lift shall be compacted by a minimum of 6 passes with a minimum 5 ton static drum weight vibratory roller such as BOMAG BW 211 or equivalent. For backfilling of utility removal areas, etc., fill shall be placed in 6 inch lifts and compacted by a minimum of 6 passes with a double drum walk behind vibratory roller such as a BOMAG BW 65 or equivalent.
- E. The fill shall be compacted to a minimum dry density equal to 95% of the maximum laboratory dry density as determined by the Modified Proctor Test (ASTM D 1557-78).

3.02 POLLUTION CONTROLS

A. DUST

During grading operations, the Contractor shall continually use water sprinkling and other suitable methods to minimize the amount of dust and dirt rising into the air to the lowest practical level possible. The Contractor shall not use water when dangerous icing or flooding may occur. The Contractor shall comply with all governing regulations pertaining to environmental protection, soil erosion and dust control and shall install and maintain all control measures indicated on the Contract Drawings and as specified herein.

B. NOISE

The Contractor shall make all attempts necessary to reduce noise emissions from the site during demolition operations. Noise levels shall be maintained at or below State standards.

END OF SECTION

NO TEXT ON THIS PAGE

SECTION 31 25 00
SOIL EROSION & SEDIMENT CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Install and maintain all temporary soil erosion and sediment control measures as specified herein.
- B. The control of construction water discharge shall be managed by the Contractor in a manner to be determined as part of their means-and-methods. Actual measures for this purpose shall comply all applicable laws and regulations.
- C. Comply with the construction, maintenance, inspection, cleaning, remedial and close-out measures per the project Storm Water Pollution Prevention Plan (SWPPP).
- D. Any dewatering, if necessary, shall be the sole responsibility of the contractor as part of his means and methods.
- E. The discharge of construction water from the demolition, utility removal, grading and other earthwork operations from non-stabilized areas, to off-site is not permissible.

1.02 RELATED DOCUMENTS

- A. The project Storm Water Pollution Prevention Plan (SWPPP) has been prepared by Langan Engineering and Environmental Services (Langan), copies of which are available for bid evaluation purposes from the office of the Construction Manager.

1.03 QUALITY ASSURANCE

- A. Regulatory Requirements

Work of this section shall conform to all requirements of the New York Guidelines for Urban Erosion and Sediment Control, the project Storm Water Pollution Prevention Plan (SWPPP), the NYC Building Code, and all applicable regulations of governmental authorities having jurisdiction including safety, health, and anti-pollution regulations. Where more severe than those requirements contained in the Guidelines, the Building Code, and the project specifications, the requirements of this section shall govern.

- B. ACOE Section 404 U.S. Clean Water Act as it relates to regulating the discharge of dredged and fill material into water bodies.
- C. Construction Inspection Requirements

All work included in this section shall be subject to inspection by the Resident Engineer.

1.04 SUBMITTALS

A. Erosion and Sedimentation Tracking Log

1. Document daily maintenance of erosion and sedimentation control (ESC) measures; describe any significant rainfall events, flooding events, or wave action, and their effects; describe any repairs or replacement.
2. Photograph any significant siltation after rainfall/flooding; photograph significant repairs; attach photographs to log.
3. Submit a copy of the log for review on a monthly basis.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Filter Fabric (supplement as needed)

1. Filter fabric for the silt fence shall be Mirafi 100x or approved equal.
2. Filter fabric for the stabilized construction entrance and the sediment trap outlet protection shall be Mirafi 600x or approved equal.
3. Sediment Removal System shall be 3'x 3' Mirafi 180N dirt bag.

B. Crushed Stone (supplement as needed)

1. Crushed stone for the construction entrance and on-site roadways shall be crushed stone to the requirements of NYSDOT Standard Specifications Table 703-4 size designation #3.

C. Turbidity Curtain

1. Turbidity curtain shall be Type III for high velocity water courses.

PART 3 - EXECUTION

3.01 STORM WATER POLLUTION PREVENTION PLAN

- A. Comply with the construction, maintenance, inspection, cleaning and close-out measures per the project Storm Water Pollution Prevention Plan (SWPPP).
- B. Notwithstanding the (SWPPP) document, the choice and execution of dewatering methods, if required, shall be the sole responsibility of the Contractor as part of his means and methods.

- C. The discharge of construction water from the demolition activities, utility removal, grading and other earthwork operations from non-stabilized areas, to off-site is not permissible. Roof-water connections and piped discharge will be allowable only upon stabilization of the areas served.
- D. Stabilization is defined as when there is no exposed soil or other detrimental materials that can potentially enter the sewer system or waterways.

3.02 SEDIMENT CONTROL MEASURES

A. Silt Fence (supplement as needed)

- 1. Fabric shall be set between wood posts of sound quality hardwood with a minimum cross sectional area of 3 sq in or approved equal. Acceptable prefabricated units include Envirofence or an approved equal.

B. Stabilized Construction Exit Pad

- 1. The crushed stone vehicle wheel cleaning blanket will be maintained at the site construction exits as shown on the Drawings.
- 2. The blanket shall have minimum dimensions 50 ft x 20 ft x 6 inches to prevent off-site tracking of sediment by construction traffic. The crushed stone and non-woven fabric shall be placed over a subgrade free of loose or wet soils or standing water.
- 3. The exit shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. All sediment spilled, dropped, washed or tracked to public rights-of-way must be removed immediately. When washing is required, it shall be done on an area stabilized with stone, which drains into an approved sediment trapping device. Periodic inspection and needed maintenance shall be provided after each rainfall event.

C. Temporary Stabilization Measures

- 1. A temporarily stabilization measure for exposed areas will be the placement of an approximately 4" thick layer of crushed clean stone.

D. Turbidity Curtain

- 1. Turbidity Curtain shall be installed in areas indicated on the Contact Drawings.
- 2. The end of the turbidity curtain shall be anchored securely at the shoreline at or above the mean high water (MHW) elevation in accordance with manufacturer's specifications.
- 3. Contractor shall deploy anchors to sustain silt boom in place.

3.03 MAINTENANCE OF SEDIMENT CONTROL MEASURES

A. General

1. It shall be the responsibility of the Contractor to maintain the erosion and sediment control measures, as specified herein, for the contract period.

B. Inspection/Repair

1. All erosion and sediment control measures will be checked for stability and operation by the Contractor following every runoff-producing rainfall but in no case less than once every week. Any needed repairs or maintenance will be done immediately to maintain all practices as designed.
2. Maintenance to the silt fence shall be performed as soon as 6" of sediment have accumulated behind the fence fabric, and upon completion of the contract.
3. The turbidity curtain shall be inspected daily and repaired or replaced immediately. It is not normally necessary to remove sediment deposited behind the curtain but when necessary, removal is completed by hand prior to removal of the barrier. Any floating construction or natural debris shall be immediately removed to prevent damage to the curtain.
4. Contractor shall move turbidity curtain by hand or through the use of construction equipment to allow passage of barges and other waterborne vehicles, if required.

END OF SECTION

SECTION 31 62 13

PRESTRESSED CONCRETE PILES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Work of this Section includes all labor, materials, equipment, and services necessary to provide new precast-prestressed concrete piles with H-pile stingers (lower steel sections) based on the number, size, capacity, and lengths of piles as shown on the Contract Drawings and/or specified herein.
 - 1. Fabricate plant precast-prestressed concrete piles with H-pile lower steel section(s) and components indicated. Include the following:
 - a. Steel H-piles with welded studs and driving shoes.
 - b. Prestressing and reinforcing steel, threaded bars/dowels, tubing, and other pile accessory components.
 - c. Plant facility quality control specified as a minimum.
 - 2. Drive piles to the required penetrations indicated as a minimum.
 - a. Include quality control recording of each pile driven and field verification survey of pile layout and elevations.
 - 3. Cut-off piles as specified.
- B. Related Sections include the following:
 - 1. General Conditions "Quality Requirements".
 - 2. General Conditions "Execution Requirements" for additional field surveying provisions.
 - 3. Division 3 Section 033129 "Marine Concrete" for referenced concrete mix design criteria; referenced cement, water, aggregate, and admixture materials; and other provisions related to providing concrete for production of concrete piles.

1.3 DESIGN AND PERFORMANCE REQUIREMENTS

- A. Piling: Provide precast-prestressed concrete piles in accordance with PCI JR-382 in addition to requirements specified in this Section.

- B. Concrete Mixture Design: Prior to precasting of concrete precast-prestressed pile units, submit concrete mix design(s) and proportions for a concrete mixture for strength and type of concrete to be used in precast concrete work as specified in Division 3 Section 033129 "Marine Concrete" in addition to requirements of this Section.
- C. Indicator Piles: Provide number of Indicator Piles at locations shown on Contract Drawings for use in formulating pile tip elevations. Indicator Piles shall be installed prior to production piles.
- D. Production Piling Lengths: Contractor shall propose order lengths for production piles based on subsurface information furnished and supplemented by Drive Test Piles and/or Indicator Piles made by the Contractor.
- E. Design Loads:

Table 1:

	Axial (Kips)	Moment (Kip-Ft)	Shear (Kips)
Service Load	90	613	40
Ultimate Load	134	980	64

1.4 SUBMITTALS

- A. General: Refer to and comply with General Conditions "Submittals Procedures", for procedures and additional submittal criteria.
 - 1. Relate to and arrange submittal requirements of this Section together with Division 3 Section 033129 "Marine Concrete".
- B. Qualification Submittals: Submit for the following and as additionally specified in Article "Quality Assurance" herein. Include lists of completed projects with project names and addresses, names and addresses of architects/engineers and owners, and other information specified.
 - 1. Pile pre-casting plant facilities.
 - 2. Steel (H-pile) Fabricator/Supplier.
 - 3. Contractor's Engineer: Submit qualifications of the Contractor's Engineer demonstrating experience in pile design and in monitoring and certifying pile installations of similar type and capacity to those of this Project.
 - 4. Contractor's Surveyor: Submit qualifications of the Contractor's Surveyor demonstrating experience in surveying pier piles over water similar to conditions of this Project.
- C. Product Data:
 - 1. Submit manufacturer's technical data and test reports for each material item and component of this Section including the following:

- a. Cement, aggregate, and admixture material to be used. Relate to concrete mix design requirements as specified.
 - b. Prestressing steel, reinforcing steel, steel tubing, and related accessory item material to be used.
 - c. Form materials and related forming accessories.
 - d. Steel material(s) including H-pile stingers, steel studs, driving shoes, splice units, and splice welding materials.
 - e. Patching Mortar and Grout materials.
2. Equipment Data – For Information:
- a. Calibrated gage for tension measurements with identification of last calibration and laboratory performing calibration.
 - b. Submit a complete description of each pile hammer for driving precast-prestressed concrete piles with H-pile stingers (lower steel sections), including operational characteristics, rated energy, date of purchase, and date and description of last overhaul. Include data for driving helmets, capblocks, and pile cushions.
- D. Shop Drawings:
1. Pile Identification Plan: Prior to pile driving prepare and submit a pile identification plan showing location of piles, pile cut-off elevations, and a numbering system for the piles.
 2. Pile Fabrication: Submit for pile fabrication to include the following:
 - a. Prepare in accordance with ACI315. Indicate placement of reinforcement including tendons. Indicate location of special embedded or attached lifting devices, employment of pick-up points, support points other than pick-up points, and any other methods of pick-up.
 - b. Show details and coordination with pier grounding system specified as related work.
 - c. Pile order lengths total and with lower steel section H-pile stinger and precast lengths clearly indicated.
 3. Pile Driving Work/Procedure Plans: Include the following:
 - a. Detailed description and/or drawings of proposed pile alignment jig or template.
 - b. Proposed sequence for driving all piles.
 - c. Proposed procedure for welding pile shoes to meet requirements specified for "Welding Pile Shoes" in Part 3 Article "Field Fabrication" of this Section.
 - d. Proposed procedure for splicing stingers, including a plan for positioning all field and shop splices to meet requirements specified herein and detailed procedures for performing field splices.
 - e. Plan for installing indicator piles, including sequence of installation, if indicator piles are shown on the Contract Drawings or if Contractor elects to drive additional indicator piles.
 - f. Details of predrilling or preaugering operations, if required to advance piles.
 - g. Details for allowing installation of dowels at top of piles.

- E. Quality Control Submittals:
1. Design Data:
 - a. Concrete Mix Design: Submit a concrete mix design before concrete is placed, for each type of concrete used for the piles. Conform to requirements specified in this Section and in Division 3 Section 033129 "Marine Concrete".
 - b. Calculations: Submit calculations prepared by the Contractor's Engineer demonstrating that pile unit handling and storage stresses as proposed by the Contractor do not exceed values permitted by PCI JR-382.
 2. Test Pile Records, Wave Equation Analysis, and Supplementary Office Analysis: Submit records and each analysis at least 14 days prior to pile installation.
 3. Test Reports: Submit the following prior to delivery and driving piles and in accordance with Part 2 Article "Product/Source Quality Control":
 - a. Concrete Aggregates Tests: Each type and grade.
 - b. Concrete Strength Tests: Submit concrete cylinder compressive strength test results.
 - c. Certified mill test reports for steel H-pile stinger material.
 4. Precasting Manufacturer's Quality Control Procedures: Submit precasting manufacturer's quality control procedures established in accordance with PCI MNL-116. Submit prior to casting piles. In addition, include the following:
 - a. Concrete Placement and Compaction:
 - 1) Submit technical literature for equipment and methods proposed for use in placing concrete. Include pumping or conveying equipment including type, size and material for pipe, valve characteristics, and the maximum length and height concrete will be pumped. No adjustments shall be made to the mixture design to facilitate pumping.
 - 2) Submit technical literature for equipment and methods proposed for vibrating and compacting concrete. Submittal shall include technical literature describing the equipment including vibrator diameter, length, frequency, amplitude, centrifugal force, and manufacturer's description of the radius of influence under load.
 - b. Curing Concrete Elements: Submit proposed materials and methods for curing concrete elements.
 5. Certificates:
 - a. Prestressing steel material compliance.
 - b. Certifications by the Contractor's Engineer that all pile materials conform to the requirements of Project and this Section.
 - c. Verification of welder qualifications for shop fabrication and/or field welding

shear studs, H-pile stingers, pile shoes, and other structural conditions.

6. Field Quality Control Records: Submit Pile driving and test pile records for precast prestressed concrete pile work.
- F. Contract Closeout Submittals: No superstructure shall be constructed prior to the approval of the following documentation.
1. Record Documents: Submit as-built drawing(s) showing the exact location of precast-prestressed concrete piles driven including plumbness and horizontal deviation from theoretical position and including identification of abandoned piles. Survey information may be submitted on several drawings, each covering a partial area only, as the job progresses, in order to expedite the approval of the pile work, but upon completion of all pile driving, the Contractor shall submit as-built drawings (Record Documents) having the same locations of all the piles, including obstructed, damaged and compensating piles, percentage out of plumb, and the cut-off elevation and length below cut-off for each precast-prestressed concrete pile.
 - a. Relate to survey requirements for Verification of Pile Layout and Elevations specified in Part 3 Article "Field Quality Control".

1.5 REFERENCES AND STANDARDS

- A. Publications listed below form a part of this section to the extent referenced. Publications are referred to in the text by the basic designation only.
1. American Concrete Institute (ACI):

ACI 214	Evaluation of Strength Test Results of Concrete
ACI 315	Details and Detailing of Concrete Reinforcement
 2. American Society For Testing and Materials (ASTM):

ASTM A27/A27M	Steel Castings, Carbon, for General Applications
ASTM A572	Structural Steel
ASTM A82	Steel Wire, Plain, for Concrete Reinforcement
ASTM A416/A416M	Steel Strand, Uncoated Seven-Wire for Prestressed Concrete
ASTM A615/A615M	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM A706/A706M	Low-Alloy Steel Deformed Bars for Concrete Reinforcement
ASTM A722	Uncoated High-Strength Steel Bars for Prestressing Concrete
ASTM A775/A775M	Epoxy-Coated Steel Reinforcing Bars
ASTM A884/A884M	Epoxy-Coated Steel Wire and Welded Wire Fabric for Reinforcement
ASTM C31/C31M	Making and Curing Concrete Test Specimens in the Field
ASTM C33	Concrete Aggregates
ASTM C39	Compressive Strength of Cylindrical Concrete Specimens
ASTM C136	Sieve Analysis of Fine and Coarse Aggregates

ASTM C143/C143M	Slump of Hydraulic Cement Concrete
ASTM C172	Sampling Freshly Mixed Concrete
ASTM D1785	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120

3. American Welding Society, Inc. (AWS):

AWS D1.1	Structural Welding Code – Steel
AWS D1.4	Structural Welding Code - Reinforcing Steel
AWS D1.5	Bridge Welding Code

4. Precast/Prestressed Concrete Institute (PCI):

PCI STD-112	Standard Prestressed Concrete Piles
PCI MNL-116	Quality Control for Plants and Production of Precast Prestressed Concrete Products
PCI JR-119	Grouting of Post-Tensioned Prestressed Concrete
PCI JR-382	Design, Manufacture and Installation of Prestressed Concrete Piling

- B. Refer to General Conditions "References and Definitions" for additional and related provisions.

1.6 QUALITY ASSURANCE

- A. The provisions of the Building Code of the City of New York, relating to Pile Foundations shall in general govern the work of this Section, except that where more severe requirements than those contained in the Code are given in this Section.
- B. Pile Pre-casting Plant Facilities: Pre-cast Fabricator / Producer shall exhibit experience in producing precast-prestressed concrete piles with H-pile stingers with sufficient production capacity to produce required pile units for this Project without delaying the Work. Pile production shall be with quality control requirements as further specified in Part 2 Article "Product Source Quality Control" herein.
- C. Steel (H-Pile) Fabricator/Supplier: Engage an experienced fabricator firm that has completed work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance. The steel fabricating plant shall be certified under the AISC FCD for Category Sbr, Simple Bridge Structures.
- D. Contractor's Engineer: Contractor shall engage the services of a New York State Licensed Professional Engineer (Contractor's Engineer) for pile design detailing and who shall be present on the site at all times during pile installations to ensure and certify the piles are installed in accordance with design and code requirements. Contractor's Licensed Professional Engineer shall prepare and submit, in the requisite number of copies, a report of the pile driving and shall also fulfill all other requirements specified.
- E. Contractor's Surveyor: Contractor shall, in accordance with the provisions of General Conditions "Execution Requirements", engage the services of an approved and independent

New York State Licensed Surveyor (Contractor's Surveyor), approved by the Commissioner, for the performance of the survey work called for herein. The installed location of each pile shall be established by survey and shown on survey drawings, copies of which shall be submitted by the Contractor in accordance with the provisions specified elsewhere in the Project Manual and in paragraph entitled "Verification of Pile Layouts and Elevations" of Part 3 Article "Field Quality Control" herein.

F. Qualifications of Welders:

1. Submit the Welding Procedure Specifications (WPS) for all welding, including welding done using prequalified procedures. Prequalified procedures may be submitted for information only; however, procedures that are not prequalified shall be submitted for approval.
2. Qualifications of Welders:
 - a. Qualify welders in accordance with AWS D1.1 and/or D1.5 as specified for each process, position, and joint configuration. Each operator shall have been qualified as prescribed by AWS within the preceding one-year period for the work required. Welder qualification shall include passing the bend test.
 - b. Require welders to retake the qualification test if, as determined by the Commissioner, there is a reasonable doubt as to the proficiency of the welder. If the welder does not re-qualify, he shall not perform any welding on the Project.
 - c. Pay all costs associated with welder qualification.

G. Coordinate work in concrete pile fabrication / pre-casting facility and in the field to allow testing of provision for ground continuity.

1.7 DELIVERY, HANDLING, AND STORAGE

- A. Deliver precast-prestressed concrete piles with H-pile stingers to Project site in such quantities and at such times to ensure continuity of installation.
- B. Prestressed concrete piles shall be handled, transported, and stored by methods that will not damage the pile. Piles shall be supported while being handled, transported, and stored by acceptable methods that do not damage piles, or else shall be supported along their full length. Piles damaged in handling or driving shall be replaced by the Contractor unless repairs can be made satisfactory to the Commissioner.

1.8 PROJECT / SITE CONDITIONS

- A. Subsurface Conditions (Including Underwater):
 1. Reference General Conditions "Execution Requirements".
 2. Review all available information and make an independent interpretation of the surface and subsurface conditions that may affect the work of the Contract.

- B. Do not drive piles until the mudline is clear of debris, until designated existing piles have been removed, and other materials have been removed that may interfere with pile driving.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cement, Water, Aggregates, and Admixtures: Conform to Division 3 Section 033129 "Marine Concrete".
- B. Prestressing Steel: Use seven-wire stress relieved strand conforming to ASTM A416/A416M. Use prestressing steel free of grease, oil, wax, paint, soil, dirt, and loose rust. Do not use prestressing strands or wire having kinks, bends, or other defects.
- C. Reinforcing Steel:
 - 1. Typical Rebar: Conform to ASTM A615/A615M, Grade 60 or ASTM A706/A706M, coated in conformance with ASTM A775/A775M.
- D. Ties and Spirals:
 - 1. Ties: Conform to ASTM A615/A615M, coated in conformance with ASTM A775/A775M.
 - 2. Spirals: Conform to ASTM A615/A615M, coated in conformance with ASTM A775/A775M or spirals conforming to ASTM A82, coated in conformance with ASTM A884/A884M, Class A, Type 2.
- E. Materials for Forms, General: Provide metal forms as follows and as further specified for "Formwork" in Article "Fabrication of Pretensioned Piles":
 - 1. Metal form surfaces shall not contain irregularities, dents, or sags and shall produce a dense smooth finish. Brace forms to prevent deformation.
 - 2. Provide forming for chamfer profiles at exposed edges of concrete piles.
 - 3. Form ties and accessories shall not reduce the effective cover of the reinforcement.
 - 4. Provide forms with a form treatment to prevent bond of the concrete to the form.
- F. Grout:
 - 1. Cement Type: Provide cement grout for prestressed piles using materials conforming to requirements stipulated herein for concrete mixes. Use admixtures, if required, known to have no injurious effects on steel or concrete. Do not use calcium chloride.
 - 2. Epoxy Type: Non-shrink epoxy grout with minimum compressive strength of 16,000psi.
- G. Patching Mortar:
 - 1. Above Water Placement: Cementitious patching mortar with corrosion

- inhibitor.
2. Below Water Placement: Epoxy patching mortar.
- H. H-Pile Stingers and Related Accessories:
1. Steel H shapes shall comply with ASTM A572, Grade 50, uncoated. Conform to additional requirements related to steel H-pile stinger lengths in Article "Field Fabrication" herein.
 2. Driving Shoes/ Cast Steel Points shall be Associated Pile and Fitting Corporation's Model HP 77750, or approved equal casting. Conform to ASTM A27, Grade 65/35, Heat Treated.
 3. Splice Unit: Manufacturer's standard splice unit, fabricated from two connected steel plates, of same material as H-pile, shaped and tapered to encase web and part of each flange such as Associated Pile & Fitting Corp.'s Model HP-30000, or approved equal.
- I. Corrugated (Flexible) Steel Tubing: Provide tubing sizes as shown, hot dipped galvanized.
- J. High Strength Threaded Bars: Provide 150ksi threaded bar **conforming to ASTM A722**, or approved equal. Bars **shall be hot dipped galvanized**.
- K. PVC Conduit / Sleeves: At indicated condition provide conduit / sleeves shall be PVC, Schedule 40, type conforming to provisions of ASTM D1785.
- L. Welded Studs: Conform to ASTM A108, grades 1010 through 1020.
- M. Epoxy Repair Coating: Liquid two-part epoxy repair coating, compatible with epoxy coating on reinforcement.

2.2 CONCRETE MIX DESIGN

- A. Conform design of concrete mixes to Division 3 Section 033129 "Marine Concrete" and to requirements specified in Article "Product/Source Quality Control" herein.

2.3 FABRICATION OF PRETENSIONED PILES

- A. Formwork: Provide forms of metal, braced and stiffened against deformation, accurately constructed, watertight, and supported on unyielding casting beds. Forms shall permit movement of pile without damage during release of prestressing force. Make piles to dimensional tolerances in accordance with PCI MNL-116.
1. Form precast dowel holes with galvanized flexible metal conduit/tubing. Anchor void forms firmly so they will not move, float or collapse during placing of concrete.
 2. At designated precast prestressed concrete grounding piles, install connection plates and grounding jumper cables prior to concrete placement. Inter-connections to strands and H-pile stingers shall be provided.
- B. Steel H Pile Stingers (Lower Steel Sections):

1. Fabricate H-Pile stingers to minimize field splicing during driving, with ends square.
 2. Fabricate H-Pile stingers with web holes and shear studs as indicated and, in case of splicing, fabricate stingers by splicing lengths of H-pile together.
 - a. Install shear studs in accordance with the manufacturer's recommendations and AWS D1.1.
 - b. Accurately mill meeting ends of piles and bevel for welding. Maintain axial alignment of pile stinger lengths. Comply with additional requirements in Part 3 Article "Field Fabrication" including splicing limitations.
 3. Fit and weld driving points to tip of pile according to manufacturer's written instructions and AWS D1.5 for procedures, appearance and quality of welds, and methods used in correcting welding work.
 4. City of New York will perform ultrasonic testing of welds in accordance with "Field Weld Testing and Inspection" in Part 3 Article "Field Quality Control" herein.
- C. Pretensioning: Measure tension to which steel is to be pretensioned by jack pressure read on a calibrated gage and verify by elongation of steel. Use gage calibrated within last 6 months by a testing laboratory approved by Commissioner. Provide means for measuring elongation of steel to nearest 1/8 inch. When difference between results of measurement and gage reading is more than 5 percent, determine cause of discrepancy and correct. Give tensioning steel a uniform prestress prior to being brought to design prestress. Induce same initial prestress in each unit when several units of prestressing steel in a pile are stretched simultaneously.
- D. Handling and Placing Epoxy Coated Rebar, Ties, Spirals, and Other Coated Items:
1. Handling and Storage:
 - a. Provide systems for handling coated steel items which have padded contact areas, nylon slings, etc., all free of dirt and grit. Lift bundled coated items with strong back, multiple supports, or platform bridge to prevent sagging and abrasion. Bundling bands shall be padded where in contact with coated steel. Do not drop or drag coated steel items or bundles.
 - b. Store coated steel items in shop, aboveground, on wooden or padded cribbing. Space the dunnage close enough to prevent excessive sags. Stack large quantities of straight bars with adequate protective blocking between layers. Protect from direct sunlight and weather.
 2. Placement and Coating Repair: Carefully handle and install coated steel items (Rebar, Ties, Spirals, etc.) to minimize job site coating repair. Use the same precautions as described above for delivery, handling, and storage when placing reinforcement. Do not drag coated steel items over strains or over abrasive surfaces. Keep coated steel items free of dirt and grit. It is not expected that coated items, when in final position ready for concrete placement, will be completely free of damaged areas; however, excessive nicks and scrapes exceeding the limits specified by ASTM A775/A775M, which expose steel will be cause for rejection. Criteria for defects which require repair and for those that do not require repair are as indicated. Inspect for defects and

- provide required repairs prior to assembly. After assembly, re-inspect and provide final repairs.
- a. Immediately prior to application of the patching material to damaged coated steel items, any rust and debonded coating shall be manually removed by suitable techniques employing devices such as wire brushes and emery paper. Care shall be exercised during this surface preparation so that the damaged areas are not enlarged more than necessary to accomplish the repair. Damaged areas shall be clean of dirt, debris, oil, and similar materials prior to application of the patching material.
 - b. Repair and patching of coated steel items bars shall be done in accordance with the patching material manufacturer's recommendations.
 - c. Allow adequate time for the patching materials to cure in accordance with the manufacturer's recommendation prior to concrete placement.
 - d. Rinse placed reinforcing bars with fresh water to remove chloride contamination prior to placing concrete.
3. Inspect placed coated steel reinforcing for coating damage prior to placing concrete. Repair all visible damage.
- E. Placing and Casting Concrete: Provide concrete for precasting as specified in Article "Batching, Measuring, Mixing, and Transporting" of Division 3 Section 033129 "Marine Concrete" in addition to the following:
1. Perform concrete casting within 3 days after pretensioning steel; however, do not deposit concrete in forms until placement of reinforcement and anchorages has been inspected and approved by pile manufacturer's quality control representative.
 - a. Produce each pile of dense concrete straight with smooth surfaces with reinforcement retained in its proper position during fabrication.
 - b. Use vibrator with heads smaller than the minimum distance between steel for pretensioning.
Make surface of pile ends perpendicular to axis of pile.
 - c. Chamfer ends of piles and corners of square piles one (1") inch.
 2. Conveying: Clean conveying equipment thoroughly before each run. Convey concrete from mixer to forms as rapidly as practicable by methods that will not cause segregation or loss of ingredients. Deposit concrete as nearly as practicable to its final position. During placing, make any free vertical drop of the concrete less than 3 feet. Remove concrete which has segregated in conveying or placing.
- F. Curing of Piles: Cure concrete piles using moist or accelerated curing method.
1. Moist Curing: Moist cure using moist burlap coverings, plastic sheeting, or membrane curing compound until minimum strength to detension is achieved.
 2. Accelerated Curing: After placement of concrete, moist cure for a period of 4 hours. Accelerated cure until concrete has reached specified release strength. Enclose casting bed for accelerated curing with a suitable enclosure.

- a. During application of steam or heat, increase the air temperature at a rate not to exceed 60 degrees F. per hour.
 - b. Cure at a maximum temperature of 160 degrees F. until concrete has reached specified release strength. Reduce temperature at a rate not to exceed 60 degrees F. per hour until a temperature of 20 degrees F. above ambient air temperature is reached.
 - c. After accelerated curing, moist cure using either water or membrane curing until a total accelerated and moist curing time of 72 hours is achieved.
- G. Detensioning: Perform releasing of prestressed steel in pretensioned piles in such an order that eccentricity of prestress will be minimized. Gradually release tension in strands from anchorage.

Detension after approval by pile manufacturer's quality control representative. Perform transfer of prestressing force when concrete has reached a minimum compressive strength of 4,000 psi.

1. Initial tension shall be 31 kips per strand.
2. Minimum concrete effective pre-stress (F_{pc}) shall be 1000 psi.

2.4 PRODUCT/SOURCE QUALITY CONTROL

A. Plant Facility Quality Control Program:

1. Where piling is manufactured in a plant with an established precast concrete quality control program as attested to by a current certification in the PCI "Certification Program for Quality Control", perform product quality control in accordance with PCI MNL-116.
2. Where piling is manufactured by specialists or in plants not currently enrolled in the PCI "Certification Program for Quality Control", set-up a product quality control system in accordance with PCI MNL-116 and perform concrete and aggregate quality control testing using an independent commercial testing laboratory approved by the Commissioner in accordance with the following:
 - a. Concrete Aggregate Tests: Take samples of fine and coarse aggregate at concrete batch plant and test. Perform mechanical analysis (one test for each aggregate size) in accordance with ASTM C136. Tabulate results of tests in accordance with ASTM C33.
 - b. Concrete Strength Tests: Sample concrete in accordance with ASTM C172 at time concrete is deposited for each production line. Perform slump tests in accordance with ASTM C143/C143M. Mold cylinders in accordance with ASTM C31/C31M.
 - 1) Mold at least six (6) cylinders per day or one for every 20 cubic yards of concrete placed, whichever is greater. Cure cylinders in same manner as

- piles and for accelerated curing, place at coolest point in casting bed. Perform strength tests in accordance with ASTM C39.
- 2) Test two cylinders of each set at 7 days or 14 days, or at a time for establishing transfer of prestressing force (release strength) and removal of pile from forms.
 - 3) Test remaining cylinders of each set 28 days after molding.
- B. Changes in Concrete Proportions: If, after evaluation of strength test results, compressive strength is less than specified compressive strength, make adjustments in proportions and water content and changes in temperature, moisture, and curing procedures as necessary to secure specified strength. Submit changes in mix design to Commissioner in writing.
- C. Concrete Compressive Strength Test Results: Evaluate compressive strength test results at 28 days in accordance with ACI 214 using a coefficient of variation of 10 percent. Evaluate strength of concrete by averaging test results of each set of standard cylinders tested at 28 days. Not more than 10 percent of individual cylinders tested shall have a compressive strength less than specified average compressive strength.
- D. Testing of End-Welded Studs:
1. End-welded studs shall be random sampled and tested from stock furnished to each project. Tests shall meet the requirements of Type B in Table 7.1 of AWS D1.5. The minimum number of tests of each required property shall be as follows:

Number of Pieces to be used from Identified	Number of Specimens
150 and less	1
151 to 280	2

Number of Pieces to be used from Identified	Number of Specimens
281 to 500	3
501 to 1,200	5
1,201 to 3,200	8
3,201 to 10,000	13
10,001 and over	20

- a. A minimum of three pieces from each lot shall be tested.
2. Production control testing shall be in accordance with AWS D1.5 Chapter 7.
 3. As a minimum test, in accordance with AWS D1.5 paragraph 7.8, ten percent of all welded studs.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Layout and Field Survey Work: Comply with General Conditions "Execution Requirements" and additional provisions of this Section.
- B. Protection: Protect existing structures including overhead and/or buried utility lines.

3.2 FIELD FABRICATION

- A. Splice Welding H-Pile Stingers and Welding Pile Shoes: Splice steel sections using H-pile splicer installed in accordance with manufacturer's recommendations to achieve full moment splice or use approved full penetration butt welds. Equip pile tips with driving shoes continuously welded to pile.
 - 1. Perform all welding in accordance with requirements for shielded metal arc welding of AWS D1.5.
 - 2. Only use welders qualified by tests prescribed in AWS D1.5.
 - 3. Unless stricter requirements are shown on the Contract Drawing, splice sections of H Pile stinger with approved butt weld. Accurately mill meeting ends of piles and bevel for welding. Use an approved jig or alignment device during welding to assure that after splicing, the alignment of the centering of the un-driven portion of the pile does not deviate from the alignment of the centering of the driven portion of the pile by more than 3/8 inch in 40 feet. For splices made during pile installation, rigid frame pile leads may be used as a jig in a manner approved by the Commissioner and/or Construction Manager.
- B. Splicing Limitations: Unless otherwise permitted by the Commissioner based on field conditions, the number and location of splices shall comply with the following limitations:
 - 1. No splice closer than 25 feet from the pile tip.
 - 2. No splice closer than 15 feet from the bottom of the precast concrete section.
 - 3. No more than two splices per H-pile section up to 100 feet long.
 - 4. No more than three splices per H-pile section over 100 feet long.
- C. City of New York will perform ultrasonic testing of welds in accordance with "Field Weld Testing and Inspection" in Part 3 Article "Field Quality Control" herein.

3.3 PILE DRIVING EQUIPMENT

- A. Use rigid frame, fixed-lead type driving equipment capable of supporting pile firmly in vertical position or to required batter. Unless otherwise approved by the Commissioner, leads shall be of sufficient length so that use of a follower will not be necessary.
- B. Pile Hammer:
 - 1. Pile hammer shall develop minimum rated energy of 60,000 foot-pounds per blow and shall be capable of developing and achieving the indicated ultimate pile capacity considering hammer impact velocity; ram weight; stiffness of hammer and pile cushions; cross section, length, and total weight of pile; and character of subsurface material to be

encountered without damaging the pile. Obtain required driving energy of hammer, except for diesel hammers, by use of a heavy ram and a short stroke with low impact velocity. At final driving, operate pile hammer in accordance with manufacturer's recommendation for driving either end bearing piles or friction piles. At final driving, operate diesel powered hammers at rate recommended by manufacturer for hard driving.

- a. Maintain pressure at hammer so that:
 - 1) For double-acting hammer, the number of blows per minute during and at completion of driving of a pile is equal approximately to that at which hammer is rated;
 - 2) For single-acting hammer, there is a full upward stroke of the ram; and
 - 3) For differential type hammer, there is a slight rise of hammer base during each upward stroke.
 - b. Hammer used shall be subject to prior approval by the Commissioner.
2. Keep hammer in good mechanical condition and operate it at the speed and pressure recommended by the manufacturer.
 3. During pile driving operations, the Construction Manager may order that Contractor's Engineer make occasional measurements of the velocity of the hammer ram using Hammer Performance Analyzer (radar gun device) equipment. If the energy per blow computed in the basis of the measured ram velocity at impact is less than 80 percent of the rated energy per blow as specified by the manufacturer of the pile hammer, the Contractor shall make all necessary repairs so as to improve the energy output to a value of at least 80 percent of the rated energy per blow, or, alternatively, the Contractor shall replace the pile hammer.
- C. Use compressor that meets minimum requirements for capacity or horsepower as recommended by hammer manufacturer.
- D. Use an approved driving head designed to properly fit the head of the pile or a cast steel, outside type, drive sleeve to prevent damage to the top of the pile during driving.
- E. Driving Helmets and Cushion Blocks:
1. Driving Helmets or Caps and Pile Cushions: Use a steel driving helmet or cap including a pile cushion between top of pile and driving helmet or cap to prevent impact damage to pile. Use a driving helmet or cap and pile cushion combination capable of protecting pile head, minimizing energy absorption and dissipation, and transmitting hammer energy uniformly over top of pile. Contractor's Specialty Engineering Firm shall perform a Wave Equation Analysis of the various lengths of piles to determine the pile cushion thickness required for each range of pile length. Stresses due to driving shall not exceed 1,500 psi in compression and 500 psi in tension. Provide driving helmet or cap fit sufficiently loose around top of pile so that pile may be free to rotate without binding within driving helmet.

Use pile cushion of solid wood or of laminated construction using plywood, softwood or hardwood boards with grain parallel to end of pile. Replace pile cushion when it becomes highly compressed (50 percent of initial thickness), charred or burned, or has become spongy or deteriorated in any manner.

- a. Show details of driving helmets, capblocks, and pile cushions.
 - b. Submit details and Wave Equation Analysis for approval at least 14 days prior to pile installation.
2. Hammer Cushion or Capblock: Use a hammer cushion or capblock between driving helmet or cap and hammer ram in conformance with the recommendations of the hammer manufacturer, consisting of either a solid hardwood block with grain parallel to the pile axis and enclosed in a close-fitting steel housing or of aluminum and micarta (or equal) discs stacked alternately in a steel housing.
- a. The phenolic laminated plates shall be either Micarta as manufactured by Westinghouse Electric Corp., 304 Hoover Street, North Hampton, SC 29924; Conbest as manufactured by Penn State Metal Fabricators, 124 Newton Street, Brooklyn, NY 11222; or approved equal. Substitutes not employing phenolic laminate will not be permitted.
 - b. Use steel plates at top and bottom of capblock.
 - c. If wood capblock is used, replace when it becomes highly compressed (50 percent of initial thickness), charred or burned or becomes spongy or deteriorated in any manner. If aluminum or micarta capblock is used, replace discs that have become damaged, split or deteriorated in any manner. Do not replace wood capblock during final driving of any pile.
 - d. Do not use small wood blocks, wood chips, rope, or other materials that permit excessive loss of hammer energy.

3.4 Pile Driving

- A. Driving operations shall only be performed in the presence of the Construction Manager unless otherwise approved.
- B. Piles shall not be driven until the concrete in pile has attained a minimum concrete strength of 5,000 psi.
- C. When required, install indicator piles in locations shown on Contract Drawings or locations otherwise approved by Commissioner. Indicator Piles shall be installed prior to production piles to ascertain pile order lengths.
- D. Top of pile shall be normal to the driving force. Pile guides or leads shall be provided to maintain accurate alignment of the pile, hammer and leads to minimize bowing of pile during impact of the hammer ram.

E. Driving Piles:

1. Drive piles to refusal at top of rock or glacial till, defined as a driving resistance of 5 blows per $\frac{1}{4}$ inch unless required resistance is adjusted by the results of the pile drive tests.
2. During initial driving and until pile tip has penetrated beyond layers of very soft soil use a reduced driving energy of the hammer. If a pile fails to reach indicated minimum tip elevation, notify Commissioner and perform corrective measures as approved by Commissioner.
 - a. Provide hearing protection when noise levels exceed 140 dB.
 - b. Piles or pile sections shall not be handled or moved in any manner that would result in cracking or permanent damage to the concrete or to the grout surrounding the prestressing cables.
3. Drive piles without interruption from the first hammer blow until required penetration and driving resistance have been attained, unless otherwise approved by the Commissioner. If interruption of driving is necessitated by job requirements as approved by the Commissioner, upon resuming driving, overcome friction due to the stoppage and drive or use other approved means of advancing the pile to the approximate tip elevation of immediately adjacent piles and to the required driving resistance indicated by Contract Documents.

F. Protection of Piles: Take care to avoid damage to piles during handling, placing pile in leads, and during pile driving operations. Support piles laterally during driving, but allow rotation in leads. Square top of pile to longitudinal axis of pile. Maintain axial alignment of pile hammer with that of the pile. Use a special driving head to drive piles having strands or mild steel reinforcement projecting from head.

G. Alignments and Tolerances in Driving:

1. Drive piles with a variation of not more than two (2) percent from vertical. Maintain and check axial alignment of pile and leaders at all times.
2. If subsurface conditions cause pile drifting beyond allowable axial alignment tolerance, notify Commissioner and perform corrective measures as approved by the Commissioner.
3. Place butts within 3 inches of location indicated, as measured at pile cut-off elevation.
Manipulation of driven piles into position is not permitted.
4. Check each pile for heave. Redrive heaved piles to required point elevation as specified herein for "Correction of Deficiencies".

H. When resistance to driving makes it impossible to advance the pile to the required penetration, spud or use other approved means as necessary to permit advancement to required minimum tip penetration and then drive to the capacity indicated by Contract Documents. Jetting of Piles is not permitted.

I. Splicing of piles is not permitted except steel H-Pile stingers.

J. Pile Cut-Off: Cut off piles with a smooth level cut using pneumatic tools, sawing, or other

suitable methods approved by the Commissioner. Use of explosives for cutting is not permitted.

1. Should cut-off exceed a length such that dowels into pile caps cannot extend into the tubing sleeves provided, the Contractor shall extend the sleeves by coring or other approved methods so that the dowels can be completely embedded in the pile at no additional cost to the City of New York.
 2. Do not cut off strands at grounding piles. Connect ground wire to strand.
- K. Remove and patch all temporary lifting eyes, holes or other devices used for handling piles that are exposed above the mudline. Patch with approved patching materials in accordance with material manufacturer's written instructions.
- L. Corrections of Deficiencies:
1. Contractor shall notify the Commissioner immediately, in writing, of the failure of a pile to meet any requirements of this Section. Such written notification shall include all information required for the evaluation of remedial measures, including all information required for redesign.
 2. If it is determined that a pile does not meet the requirement of this Section, the Contractor shall perform all remedial work associated with the deficient pile, including changes to concrete and reinforcement steel in the pile cap or driving and spudding any natural or man made object or obstruction which does not permit the pile to be advanced with the approved pile driving hammer at no additional cost to the City of New York.
 3. If a pile fails to comply with the alignment or location requirements of this Section, the Contractor's Engineer shall calculate and submit to the Commissioner for approval, the load capacity requirements of that pile based on the actual, "as-driven" alignment and location. If the calculation indicates that the loading on that pile exceeds 110 percent of the design load, then the Contractor shall perform such remedial work as the Commissioner in his sole discretion may approve, including but not limited to re-driving piles, furnishing and driving additional piles at locations approved by the Commissioner and modifying concrete or reinforcement steel in piles and/or the pile cap and superstructure. All redesign costs, additional piles, and modifications to the structure shall be at no additional cost to the City of New York.
 4. In the case of a pile with some deficiency that affects load capacity, the Contractor's Engineer shall calculate the load capacity requirements of that pile, based on its actual "as-driven" location and alignment. If the calculation indicates that the loading on the pile exceeds some reduced allowable loading less than the design load, including a zero loading, as determined in the sole judgment of the Commissioner, then the Contractor shall perform such remedial work as the Commissioner may approve, including but not limited to re-driving piles, furnishing and driving additional piles at locations approved by the Commissioner and modifying concrete or reinforcement steel at no additional cost to the City of New York.
 5. If a pile fails to comply with any other requirement of this Section and the Commissioner determines that modification to concrete or reinforcement steel, or the driving of additional piles is necessary, the Contractor's Engineer shall perform all required redesign and detailing and submit to the Commissioner for approval. All

redesign costs, additional piles, and modifications to the structure shall be at no additional cost to the City of New York.

6. Contractor, at his option and at any time that he determines that a pile will not satisfy the requirements of this Section for any reason including encountering an underground obstruction, may, subject to the notification provisions hereinbefore, abandon such pile and replace it with a new pile or piles rather than await direction or approval from the Commissioner. However, the Contractor, in exercising this option, assumes the risk that such replacement pile or piles have not been installed at the proper design location and alignment so as to carry satisfactorily the design load as determined by subsequent analysis performed by the Commissioner. Such abandonment shall be for the Contractor's convenience at no additional cost to the City of New York and subject to all applicable provisions of the Contract.
7. Unless they will interfere with new construction, abandoned piles shall be removed or cut off at the mudline as approved by the Commissioner. Abandoned piles that interfere with new construction shall be removed unless otherwise directed and/or approved by the Commissioner.
8. Heaved / Uplifted Piles: After verification (Article "Field Quality Control" herein), redrive all piles that the Commissioner and/or Construction Manager determine have heaved or uplifted $\frac{1}{4}$ -inch or greater from their original tip elevations as directed and/or approved by the Commissioner.
 - a. Re-drive until both the original tip elevation and the driving resistance commensurate with pile capacities shown on the Contract Drawings have been obtained, except that if original tip elevation cannot be reached, driving may be discontinued at a resistance of 7 blows per $\frac{1}{4}$ inch.
 - b. Re-driving shall be performed at such times as approved by the Construction Manager.
 - c. Equipment for re-driving shall be as specified for original driving except that use of a free hanging hammer will be permitted.
 - d. Piles shall not be cut off until no further re-driving is required as approved by Commissioner.

3.5 FIELD QUALITY CONTROL

- A. Test Piles: Use Drive Test Piles of the same type and drive as specified for piling elsewhere in this Section. The Commissioner will use Contractor's test pile data to confirm and/or determine the necessary driving resistance for production piles. Drive Test Piles shall be installed at the locations indicated. Drive Test Piles shall be driven to refusal (5 blows per $\frac{1}{4}$ inch). Record any increase or decrease in driving resistance. Use test piles, if located properly, undamaged and offering adequate driving resistance, in finished work. Pre-drilling or jetting of test piles is not permitted.
- B. Pile Driving Tests: Pile driving tests shall be performed at locations shown on Contract Drawings. Notify Commissioner/Construction Manager at least 72 hours prior to driving of test piles. The Commissioner or Construction Manager will be present during each pile driving test at the discretion of Commissioner.

1. Pile driving tests with approved hammer based on the wave equation submittal shall be carried to completion without interruption.
 2. Any pile driving test not accomplished in accordance with this specification shall be redone at no additional cost to the City of New York.
- C. Dynamic Testing of Piles: Conform to the requirements of applicable Building Code.
- D. Field Weld Testing and Inspection: Contractor will engage an independent Testing Agency to perform field testing and inspection services for welding work related to pile field welding. Reference General Conditions "Quality Requirements" for additional and related provisions.
- E. Inspection:
1. Cooperate with the Commissioner/Construction Manager and furnish services as he may require for inspecting and obtaining data. Typical of these services shall be the measurement of length of piles, painting foot marks on piles (and inch marks for the last 2 feet of driving) and furnishing light (and related maintained power source) for inspecting piles.
 2. Contractor's Engineer shall keep a record of each pile driven. Such record will include the following data as a minimum:
 - a. Date of driving.
 - b. Pile number.
 - c. Type and size of pile.
 - d. Type, number, and location of splices.
 - e. Overall length and stinger length before driving.
 - f. Length of cut-off.
 - g. Elevation of pile top and tip to nearest 0.1 inch immediately after driving.
 - h. Hammer type and speed, rate of operation, stroke or equivalent stroke for diesel hammer.
 - i. Type of driving helmet, and type and dimension of hammer cushion (capblock) and pile cushion used.
 - j. For impact hammers, blows per foot of driven length, and blows per inch where driving resistance exceeds 75 blows per foot. For vibratory hammers, the time for each foot of penetration and time per inch of penetration when driving time exceeds 12 minutes per foot of penetration.
 - k. For impact hammers, blows per ½ inch of re-drive. For vibratory hammers, the time for each ½ inch of re-drive.
 - l. The time pile driving is started, interrupted, resumed, and stopped.
 - m. Description of any unusual circumstances affecting the driving of the particular pile.
 - n. Sounded length of each pile.
 - o. Slope of pile.
 - p. Description of any unusual occurrences during pile driving and/or any unusual circumstances affecting the driving of the particular pile, and plumbness of pile.
- F. Verification of Pile Layout and Elevations:

1. After all piles have been installed at proposed Pier location(s), the Contractor's Surveyor shall take and record optical survey measurements to establish the elevation of the top of each pile immediately after driving (or re-driving) and, subsequently, after driving adjacent piles. Submit record survey drawings to show verification of pile layout and pile elevations.
2. Pile Cut-Off Survey: Prepare and submit a pile cut off survey of completed work for each five pile bents showing both the location and top elevation of the center of each driven pre-cast concrete pile, measured in place in a compacted position.
3. Correction of Deficiencies: After initial verification, comply with Correction of Deficiencies in Article "Pile Driving" herein.

END OF SECTION 316213

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SECTION 31 62 16.13

STEEL SHEET PILING

PART 1 – GENERAL

1.1 Related Documents

- A. Drawing and general provisions of the Contract, including General and Supplementary Conditions and Divisions 1 Specification Sections, apply to this Section.

1.2 Summary

- A. The work of this Section includes all labor, materials, equipment, and services necessary to provide new steel sheet piling as shown on the Contract Drawings and/or specified herein.
 - 1. Provided steel sheet piles with protection/finished coating as specified.
 - 2. Include allocation for pulling and redriving as specified for field quality control inspection of driven sheet piles.

1.3 Design and Performance Requirements

- A. Pile Lengths: Steel sheet piles shall be of lengths indicated on the Contract Drawings. Do not order steel sheet piles until Commissioner approves order lengths.

1.4 Submittals

- A. General: Refer to and comply with General Conditions, "Submittal Procedures" for procedures and additional submittal criteria.
- B. Qualification Submittals
 - 1. Coating Applicator: Submit confirmation of qualifications for steel paint coating applicator with identification and location of firm, equipment and processes used, and quality control procedures typically followed and additionally procedures that will be instituted for work of this Section.
- C. Product Data
 - 1. Submit manufacturer's technical data for products used in work of this Section including steel materials, driving shoes, and splice welding materials.
 - 2. Equipment Data – For Information: Submit complete description of each pile hammer for driving steel sheet piles, including operational characteristics, rated energy, date of purchase, and date and description of last overhaul. Include data for driving helmets and templates, capblocks, and pile cushions. Descriptive information shall include manufacturer's name, model numbers, and capacity.

D. Shop Drawings

1. Pile Identification Plan: Prior to steel sheet pile driving, submit a sheet pile identification plan showing steel sheet pile locations, cut-off elevations, and steel sheet pile numbering system.
2. Pile Driving Template: Submit drawing or a detailed description of steel sheet pile driving template showing conformance with provisions for Templates in Article "Pile Driving Equipment".
3. Pile Work:
 - a. Steel Sheet Piles: Submit shop drawings for approval prior to start of the work or ordering materials. Include details of top protection, special reinforcing tips, tip protection, lagging, splices, fabrication additions to plain steel sheet piles, cut-off method, and corrosion protection.
 1. Steel Sheet pile order lengths.
 2. Shop drawings for sheet piling, including fabricated sections, shall show complete dimensions including minimum section properties and details of steel sheet piling and the driving sequence and location of steel sheet piling.
 3. Include details and dimensions of templates and other temporary guide structures for installing steel sheet piling.
 4. Include details of the method of hauling piling to prevent permanent deflection, distortion, or damage to steel sheet piling interlocks.
 5. Proposed sequence for driving all steel sheet piles.
 6. Proposed procedure for splicing steel sheet piles, including a plan for positioning all field and shop splices and detailing procedures for performing field splices.
 7. Pile pulling method.
 - b. Bracing: Submit for approval design calculations and details for temporary bracing system, sealed by the Contractor's Engineer.

E. Quality Control Submittals

1. Material Certificates: Certified steel material mill test reports for steel sheet pile material. Submit for each shipment identified with specific lots prior to installing steel sheet piling. Identification data should include steel sheet piling type, dimensions, chemical composition, mechanical properties, section properties, heat number, and mill identification mark.
2. Verification of welder qualifications for field welding including steel sheet pile

F. Contract Closeout Submittals

1. "As-Built" Record Drawings showing pile locations and plumbness. The concrete facing shall not be formed or placed until the as-built drawings have been approved.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

- B. American Society for Testing and Materials (ASTM)

ASTM A 690/ A 690M	High Strength Low-Alloy Steel Sheet Piling
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- C. American Welding Society (AWS)

AWS D1.1	Structural Welding Code – Steel
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1.6 Quality Assurance

- A. The provisions of the Building Code of the City of New York, relating to Pile Foundations shall in general govern the work of this Section, except that where more severe requirements than those contained in the Code are given in this Section.

- B. The Contractor shall, in accordance with the provisions of General Conditions "Quality Requirements", engage the services of a New York Licensed Professional Engineer (Contractor's Engineer) who sign and seal designs for temporary bracing systems.

1.7 Delivery and Storage

- A. Handle steel sheet piling using handling holes or lifting devices. Handle long length steel sheet piles with care to prevent damage. Support of level blocks or racks spaced not more than 10 feet apart and not more than 2 feet from the ends. Supports between multiple lefts shall be in a vertical plane.

- B. Protect steel sheet piling to prevent damage to coatings and to prevent corrosion prior to installation.

1.8 Project Conditions

- A. Subsurface Conditions (Including Underwater)

1. Review all available information and make an independent interpretation of the surface and subsurface conditions that may affect the work of the Contract.

- B. Do not drive steel sheet piles until the mudline is clear of debris and other materials have been removed that may interfere with steel sheet pile driving.

PART 2 - PRODUCTS

2.1 SHAPES

A. General Requirements

1. Steel sheet piles and special fabricated shapes shall be a design that assures continuous interlock throughout the entire length when in place.
2. Provide piling with standard size handling holes located approximately four inches below the top of the pile.
3. Welded connections shall conform to the requirements of the Section, American Welding Society "Structural Welding Code D1.1", and any applicable revisions.
4. The contractor shall submit for approval the types and dimensions of the piling to be furnished. The contractor shall not order delivery prior to receipt of written approval.
5. Steel sheet piles required for this project shall be PZ-27 with 3/8" web and flange, with elastic section modulus of 30.2 in³/ft. of wall weighing 27 lb per square foot, and 40.5 lb per lineal foot.
6. Additional length beyond those indicated by the bill of materials or drawings may be required to provide for trimming of tops of sheet piling.
7. Steel sheet piles and interlocks shall not have excessive kinks, camber or twist that would prevent the pile from reasonably free sliding to grade.
8. Steel sheet pile shall coated full length, both sides in with Marine Grade Coal Tar Epoxy.

2.2 MATERIALS

- A. Steel Sheet Piling ASTM A690 Grade 50 steel.
- B. Corners, tees, wyes and crosses - ASTM A690
- C. Wales and plate washers ASTM A572.
- D. Tie rods ASTM A722 – Grade 150 steel.

1. Tie Rod and all components to be Hot Dipped Galvanized in accordance with ASTM A-153 to a minimum thickness of 4 mils. Tie Rods to be mechanically cleaned prior to galvanizing (acid washing prohibited).
2. Tie Rods are never to be welded or subject to high heat of a torch. Field cutting should be done with an abrasive wheel or band saw.
3. All tension components for the system must develop 100% of the bars published ultimate strength.
4. Tie Rod to be fully supported along its entire length prior to any vertical loading. Backfill supporting the Tie Rod to be compacted in accordance with contract documents.
5. Tie Rod to be positioned to avoid jagged edges. All penetrations to be smooth.
6. Tie Rod to be supported at its midpoint to avoid sag.
7. All connections to be Snug-Tightened Joints.

- E. Bolts and nuts - ASTM A307 unless otherwise specified.
- F. Handling holes

1. Provide one standard 2-9/16" diameter handling hole located 4" from one end, each pile.

PART 3 - EXECUTION

3.1 Preparation

- A. Layout and Field Survey Work: Contractor to perform field survey after completion of demolition and prior to submission of platform and sheet pile layout submittal.

3.2 Field Touch Up of Pile Coating

- A. A compatible touchup system shall be provided for repair of coating defects, in accordance with the coating manufacturer's recommendations and as approved by the Commissioner.
- B. Before and after driving, touch up all abraded surfaces in the coating on sheet piles and clean and touch up all field welds. Perform touch-up in accordance with the coating manufacturer's recommendations and as approved by the Commissioner.

3.3 Pile Driving Equipment

- A. Pile Hammer: Steam, pneumatic, diesel, or vibratory hammer may be used to drive all piling. Operate hammer at the rate(s) recommended by the manufacturer throughout the entire driving period. Repair damage to piling caused by use of a pile hammer with excess delivered force or energy.
- B. Pile Protection: Use a protecting cap during driving to prevent damage to the top of the sheet piling. For sheet piles driven to bedrock, use cast steel shoe to prevent damage to the tip of the sheet piling.
- C. Templates: Prior to driving, provide template or driving frame suitable for aligning, supporting, and maintaining sheet piling in the correct position during setting and driving. Use a system of structural framing sufficiently rigid to resist lateral and driving forces and to adequately support the sheet piling until design tip elevation is achieved.
 1. Templates shall not move when supporting sheet piling. Fir templates with wood blocking to bear against the web of each alternate sheet pile and hold the sheet pile at the design location alignment. Provide outer template straps or other restraints as necessary to prevent the sheets from warping or wandering from the alignment.
 2. Mark template for the location of the leading edge for each alternate sheet pile. If in view, also mark the second level to assure that the piles are vertical and in position. If two guide marks cannot be seen, other means must be used to keep the sheet pile vertical along its leading edge.

3.4 Pile Driving

- A. Maintain steel sheet piling vertical during driving. Drive sheet piles in such a manner as to prevent damage to the sheet piles and to provide a continuous closure.
1. Drive specified steel sheet piles to the estimated tip elevations indicated on the Contract Drawings.
 - a. If refusal is reached higher than this elevation, and in the opinion of the Commissioner, an obstruction has been encountered, withdraw the sheet (or pair of sheet), and take appropriate measures to penetrate the obstruction, such as spudding, then continue driving.
 - b. The above requirement for penetrating the obstruction will be waived by the Commissioner provided that adjacent sheets (or pair of sheets) reach desired estimated tips.
 2. Where possible, drive Z-pile with the ball end leading. If an open socket is leading, a bolt or similar object placed in the bottom of the interlock will minimize packing material into it and ease driving for the next sheet. Incrementally sequence driving of individual piles such that the tip of any sheet pile shall not be more than 4 feet below that of any adjacent sheet pile.
- B. Spudding of Piles: Spudding of steel sheet piles may be used at no additional cost to the City of New York. Discontinue spudding approximately 3 feet above the indicated estimated tip elevation. Drive the sheet pile the final 3 feet of penetration.
- C. Cutting and Splicing: Subject to the provisions of other paragraphs in the Article and/or Contract Documents, piles driven to refusal or the point where additional penetration cannot be attained and are extending above the required top elevation in excess of the specified tolerance shall be cut off to the required elevation. Piles driven below the required top elevation and piles damaged by driving and cut off to permit further driving shall extend as required to reach the top elevation by splicing when directed and/or otherwise approved by the Commissioner.
1. If directed or otherwise approved by the Commissioner, splice steel sheet piles as required for driving them to depths greater than shown of the drawings and extending the sheet piles up to the required top elevation. Piles adjoining spliced piles shall be full length unless otherwise approved. If splices are allowed in adjoining piles the splices shall be spaced at least 3 feet apart in elevation.
 2. Welding of splices shall conform to the requirements of paragraph entitled "Welding" in this Article.
 - a. Ends of piles to be spliced shall be square before splicing to eliminate dips or camber. Splice piles with concentric alignment of the interlocks so that there are no discontinuities, dips or camber at the abutting interlocks.
 - b. Spliced piles shall be free sliding and able to obtain the maximum swing with contiguous piles.

3. Trim the tops of piles excessively battered during driving, when directed at no additional cost to the City of New York. Use a straight edge in cutting by burning to avoid abrupt nicks. Steel sheet pile cut-offs shall become the property of the Contractor and shall be removed from the site.
4. Bolt holes shall be drilled or may be burned and reamed by approved methods which will not damage the surrounding metal. Holes other than bolt holes shall be reasonable smooth and the proper size for rods or other items to be inserted. Do not use explosives for cutting.

D. Welding: Shop and field welding for slicing and other conditions, qualifications, of welding procedures, welders, and welding operators shall be in accordance with AWS D1.1.

E. Tolerances in Driving: Drive all steel sheet piles with a variation from vertical of not more than $\frac{1}{4}$ inch per foot. Place the steel sheet pile so the face will not be more than 6 inches from vertical alignment at any point. Top of steel sheet pile at elevation of cut-off shall be within 2 inches horizontally $\frac{1}{2}$ inch vertically of the location indicated. Manipulation of steel sheet piles to force them into position will not be permitted. Check all piles for heave. Redrive all heaved piles to the required tip elevation.

F. Correction of Deficiencies:

1. Pulling and Redriving:

a. See Article "Field Quality Control" herein for requirement to pull selected steel sheet piles after driving to determine the condition of the underground portions of sheet piles. Contractor shall remove and replace, at no additional cost to the City of New York, any pile pulled and found to be damaged to the extent that its usefulness in the structure is impaired. Redrive piles pulled and found to be in satisfactory condition.

b. The sheet pulling method must be approved by the Commissioner.

2. Remove and replace steel sheet piles found to be out of interlock at no additional cost to the City of New York.

3.5 Field Quality Control

A. Perform continuous inspection during sheet pile driving. Inspect all steel sheet piles for compliance with tolerance requirements. Bring any unusual problems that may occur to the attention of the Construction Manager.

B. Inspection of Driven Steel Sheet Piling

1. Contractor shall inspect the interlocks of the portion of the driven piles that extend above the ground. Remove and replace piles found to be out of interlock as specified for the Correction of Deficiencies in Article "Pile Driving" herein.
2. Contractor may be required to pull Commissioner selected steel sheet piles after driving to determine the condition of the underground portions of the sheet piles. Contract work shall include pulling and replacement of two pairs of piles, however any pile found to be damaged shall not be counted.
 - a. Comply with Correction of Deficiencies and Pulling and Redriving in Article "Pile Driving" herein.

C. Installation Records:

1. Maintain a pile driving record for each sheet pile. Indicate on the installation record installation dates and times, type and size of hammer, rate of operation, total driving time, dimensions of driving helmet and cap used, blows required per foot for each foot of penetration, final driving resistance in blows for final 6 inches, pile locations, pile plumbness, tip elevations, ground elevations, cut-off elevations, and any reheading or cutting of sheet pile.
2. Record and unusual sheet pile driving problems during driving.

END OF SECTION 31 62 16.13

SECTION 32 12 00
ASPHALT PAVING

PART 1 - GENERAL

1.01 SUMMARY

- A. Asphaltic concrete paving; surface course, tack coat, base course, and subbase.
- B. Asphalt roadway.

1.02 RELATED SECTIONS AND DOCUMENTS

- A. Section 31 23 00 - Backfill of Building and Utility Removal Areas
- B. New York State Department of Transportation Standard Specifications, Construction and Materials
- C. New York City Department of Transportation Bureau of Highway Operations Standard Specifications

1.03 SUBMITTALS

- A. Design Mix: Before any asphaltic concrete paving is constructed, submit actual design mix to the Commissioner for review and/or approval. Design mix submittal shall follow the format as indicated in the Asphalt Institute Manual MS-2, Marshall Stability Method; and shall include the type/name of the mix, gradation analysis, grade of asphalt cement used, Marshall Stability (lbs.), flow, effective asphalt content (percent), reclaimed asphalt pavement and direct references to the Standard Specifications sections for each material. The design shall be for a mixture listed in the current edition of the Standard Specifications. Mix designs over three (3) years old will not be accepted by the Commissioner.
- B. Material Certificates: Submit materials certificate to the Commissioner which is signed by material producer and Contractor, certifying that materials comply with, or exceed, the requirements herein.

1.04 JOB CONDITIONS

- A. Weather Limitations:
 - 1. Apply prime and tack coats when ambient temperature is above 40°F, and when temperature has been above 35°F for 12 hours immediately prior to application. Do not apply when base is wet, contains excess moisture, or during rain.
 - 2. Construct asphaltic concrete paving when atmospheric temperature is above 40°F.

1.05 REFERENCES

- A. MS-2-Mix design methods for asphaltic concrete and other hot mix types per The Asphalt Institute (AI).
- B. MS-3-Asphalt Plant Manual per The Asphalt Institute (AI)
- C. Hot Mix Asphalt Paving Handbook per US Army Corp of Engineers, UN-13 (CE MP-ET)
- D. MS-19-Basic Asphalt Emulsion Manual per The Asphalt Institute (AI)
- E. ASTM D946 - Penetration - Graded Asphalt Cement for use in Pavement Construction
- F. AASHTO M-226/ASTM D3381 Asphalt Cement.
- G. AASHTO M-140/ASTM D997 or AASHTO M-208/ASTM D-2397 Tack Coat.
- H. AASHTO M-117/ASTM D242 Mineral Filler.
- I. AASHTO T-245/ASTM D1559 Marshall Mix Design

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide asphalt-aggregate design mixture as shown on the Contract Drawings. Use locally available materials and gradations, which meet the NYSDOT Standard Specifications and exhibit satisfactory records of previous installations.
 - 1. Asphalt Concrete Base Course shall conform to NYSDOT Type 1 (Item No. 403.11) in accordance with NYSDOT Specifications Section 40B.
 - 2. Asphalt Concrete Top Course shall conform to NYSDOT Type 6 (Item No. 403.16) in accordance with NYSDOT Specifications Section 40B.
- B. Asphalt Cement: Comply with AASHTO M-226/ASTM D 3381; Table 2 AC-10, AC-20, or AC-30, viscosity grade, depending on local mean annual air temperature. (See chart below):

<u>Temperature Condition</u>	<u>Asphalt Grades</u>
Cold, mean annual air temperature at 7 degrees C (45 degrees F) or lower	AC-10 85/100 pen.
Warm, mean annual air temperature between 7 degrees C (45 degrees F) and 24 degrees C (75 degrees F)	AC-20 60/70 pen.
Hot, mean annual air temperature at 24 degrees C (75 degrees F) or higher	AC-30

- C. Prime Coat: A medium curing cut-back asphalt or an asphalt penetrating prime coat consisting of either MC-30 or SS-1h.
- D. Tack Coat: Emulsified asphalt conforming to NYSDOT Specifications Section 700. The asphalt emulsion tack coat shall meet the requirements in NYSDOT Specifications Table 702-90.
- E. Mineral Filler: Rock or slag dust, hydraulic cement, or other inert material complying with AASHTO M-17/ASTM D 242, if recommended by applicable state highway standards.
- F. Subbase: Stone subbase course shall conform to NYSDOT (Item No. 304.02) in accordance with the requirements of NYSDOT Section 304. Recycled concrete aggregate meeting the requirements of the NYSDOT Standard Specifications may be acceptable for use as subbase material subject to approval by the Engineer.
- G. Reclaimed Asphalt Pavement: All asphaltic concrete used in the City of New York shall contain not less than 30% (10% for I-4 or other approved heavy duty mix) reclaimed asphalt by weight per Local Law 71/2011.

2.02 EQUIPMENT

Maintain equipment in satisfactory operating condition and correct breakdowns in a manner that will not delay or be detrimental to progress of paving operations.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Sawcut existing pavement to produce a clean, straight edge for new work to meet.
- B. Existing asphalt pavement indicated to be removed shall be milled, stockpiled and recycled. Reclaimed asphalt pavement shall be recycled and reused in accordance with all applicable local, State and Federal regulations, including, but not limited to, Local Law 71/2011.
- C. Verify that substrate has been inspected and that substrate is hard, uniform, stable, true to gradients and elevations and dry prior to any subbase course construction.
- D. Proof roll prepared base material surface to check for areas requiring additional compaction and areas requiring removal and re-compaction.
- E. Remove loose material from compacted base material surface immediately before applying prime coat.
- F. Do not begin paving work until deficient base material areas have been corrected and are ready to receive paving.

3.02 APPLICATIONS

A. Subbase:

1. Concrete and debris suitable for potential on-site reuse shall be crushed for reuse as temporary asphalt roadway subbase material.
 - a. Contractor shall remove wood, metal and other deleterious materials from concrete prior to crushing.
 - b. Crushed concrete material shall have a maximum particle size of one inch and shall be free of wood, metal or other deleterious debris.
2. Perform subbase course construction in a manner that will drain surface properly at all times and at the same time prevent runoff from adjacent areas from draining onto subbase course construction.
3. Compact granular subbase material in 8-inch maximum loose lifts with a minimum of 6 passes of a 10 ton compactor, to not less than 95% of the optimum density as determined by ASTM D1557.

B. Prime Coat:

1. Apply bituminous prime coat to all base material surfaces where asphaltic concrete paving will be constructed.
2. Apply bituminous prime coat in accordance with APWA Section 2204 and applicable Standard Specifications.
3. Apply at minimum rate of 0.25 gallon per square yard over compacted base material. Apply to penetrate and seal, but not to flood surface.
4. Make necessary precautions to protect adjacent areas from overspray.
5. Cure and dry as long as necessary to attain penetration of compacted base and evaporation of volatile substances.

C. Tack Coat:

1. Apply to contact surfaces of previously constructed asphaltic concrete base courses or Portland cement concrete and surfaces abutting or projecting into asphaltic concrete or into asphaltic concrete pavement.
2. Apply tack coat to asphaltic concrete base course. Apply emulsified asphalt tack coat between each lift or layer of full depth asphaltic concrete and on surface of all such bases where asphaltic concrete paving will be constructed.

3. Apply emulsified asphalt tack coat in accordance with APWA Section 2204 and applicable State highway specifications.
4. Apply at minimum rate of 0.05 gallon per square yard of surface.
5. Allow to dry until at proper condition to receive paving.

3.03 ASPHALTIC CONCRETE PLACEMENT

- A. Place asphaltic concrete mixture on completed compacted subgrade surface, spread and strike off. Spread mixture at following minimum temperatures:
 1. When ambient temperature is between 40°F and 50°F, mixture temp. = 285°F
 2. When ambient temperature is between 50°F and 60°F, mixture temp. = 280°F
 3. When ambient temperature is higher than 60°F, mixture temp. = 275°F
- B. Whenever possible, all pavement shall be spread by a finishing machine; however, inaccessible or irregular areas may be placed by hand methods. The hot mixture shall be spread uniformly to the required depth with hot shovels and rakes. After spreading, the hot mixture shall be carefully smoothed to remove all segregated course aggregate and rake marks. Rakes and lutes used for hand spreading shall be of the type designed for use on asphalt mixtures. Loads shall not be dumped faster than can be properly spread. Workers shall not stand on the loose mixture while spreading.
- C. Paving Machine Placement: Apply successive lifts of asphaltic concrete in transverse directions with the surface course placed in the direction of surface-water flow. Place in typical strips not less than 10'-0" wide.
- D. Joints: Make joints between old and new pavements, or between successive days and work in a manner that will provide a continuous bond between adjoining work. Construction joints shall have same texture, density, and smoothness as other sections of asphaltic concrete course. Clean contact surfaces of all joints and apply tack coat.

3.04 ROLLING AND COMPACTION

- A. The mixture, after being spread, shall be thoroughly compacted by rolling as soon as it will bear the weight of the rollers without undue displacement. The number, weight, and types of rollers and sequences of rolling operations shall be such that the required density and surface are consistently attained while the mixture is in a workable condition.
- B. The asphalt concrete pavement shall have a minimum thickness as specified on the Contract Drawings and should be compacted to a minimum of 96% of the maximum unit weight per the Marshall Mix Design Procedures in accordance with ASTM D-1559.
- C. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.

- D. Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling, and repair displaced areas by loosening and filling with hot material.
- E. Second Rolling: Follow breakdown rolling as soon as possible, while mixture is hot. Continue second rolling until mixture has been thoroughly compacted.
- F. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained maximum density.
- G. Patching: Remove and replace paving areas mixed with foreign materials and defective areas. Cut out such areas and fill with fresh, hot asphaltic concrete. Compact by rolling to maximum surface density and smoothness.
- H. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.05 FIELD QUALITY CONTROL

- A. Grade Control: Establish and maintain required lines and elevations.
- B. Temperature: The Commissioner shall monitor the asphaltic concrete mixture on the paver immediately prior to spreading asphalt mixture to certify that the minimum temperature requirements of this section are met. Temperature measurement shall be taken on the average of one test per 20 tons of material.
- C. Thickness: In-place compacted thickness shall not be less than thickness specified on the Contract Drawings. Areas of deficient paving thickness shall receive a tack coat and a minimum 1" overlay; or shall be removed and replaced to the proper thickness, at the discretion of the Commissioner; until specified thickness of the course is met or exceeded at no additional expense to the City of New York.
- D. Surface Smoothness: The Contractor shall perform testing on the finished surface of each asphalt concrete course for smoothness, using 10'-0" straightedge applied parallel with, and at right angles to centerline of paved area. These tests shall be performed under the observation of the Commissioner. Surfaces will not be acceptable if the following 10' straightedge tolerances for smoothness are exceeded.

Base Course Surface: 1/4"
Wearing Course Surface: 3/16"

- E. Check surface areas at intervals necessary to eliminate ponding areas. Remove and replace unacceptable paving as directed by Commissioner.

- F. Compaction: The Commissioner shall perform in place density tests as part of the construction testing requirements using the Nuclear Method in accordance with ASTM D-2922 Method B direct transmission.

END OF SECTION

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**SECTION 32 16 13
CONCRETE CURBS**

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Preparation and Placement of Concrete Curb

1.02 RELATED SECTIONS AND DOCUMENTS

- A. Contract Documents

1.03 REFERENCE STANDARDS

- A. American Concrete Institute (ACI) latest edition

301	Specifications for Structural Concrete for Buildings
304R	Guide for Measuring Mixing, Transporting and Placing Concrete
308	Standard Practice for Curing Concrete

- B. American Society for Testing and Materials (ASTM) latest edition

A 185	Steel Welded Wire Fabric, Plain for Concrete Reinforcement
C497	Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement
A615	Deformed and Plain Billet-Steel for Concrete Reinforcement
C33	Concrete Aggregates
C 94	Ready-Mixed Concrete
C 150	Portland Cement
C 260	Air-Entraining Admixtures for Concrete
D 309	Liquid Membrane-Forming Compounds for Curing Concrete
C494	Chemical Admixtures for Concrete
C1751	Performed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

- C. FS TT-C-800 - Curing Compound, Concrete, for New and Existing Surfaces.

- D. New York State Department of Transportation Standard Specifications, Construction and Materials.

1.04 QUALITY ASSURANCE

- A. The Contractor shall warrant that concrete curbs are 4,000 psi.
B. Establish and maintain required lines and elevations.

- C. Sweep concrete and wash free of stains, discolorations, dirt, and other foreign material just prior to final inspection.
- D. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of material.

1.05 SUBMITTALS

- A. Submit concrete mix design to the Commissioner for review and approval at least 14 days prior to use.

1.06 PROJECT CONDITIONS

- A. Contractor shall maintain access for vehicular and pedestrian traffic as required for other construction activities. Utilize temporary striping, flagmen, barricades, warning signs, and warning lights as required.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Forms: Steel, wood, or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects. Use flexible spring steel forms or laminated boards to form radial bends as required. The forms shall be of a depth equal to the depth of curbing or sidewalk, and so designed as to permit secure fastening together at the tops. Coat forms with non-staining type coating that will not discolor or deface surface of concrete.
- B. Concrete Materials: Concrete shall have a minimum 28-day compressive strength of 4,000 psi.
- C. Joint Fillers: Resilient pre-molded bituminous impregnated fiberboard units complying with ASTM D 1751 FS HH-F-341, Type II, Class A; or AASHTO M 153, Type I.

2.02 MIX DESIGN AND TESTING

- A. Concrete mix design and testing shall comply with requirements of ACI.
- B. Design mix to produce normal weight concrete consisting of Portland cement, aggregate, water-reducing admixture, air-entraining admixture, and water to produce the following properties:

1. Compressive Strength: 4,000 psi, minimum at 28 days, unless otherwise indicated on the Contract Drawings.
2. Slump Range: 4 inches +/- 1-inch at time of placement
3. Air Entrainment: 4 to 7 percent

PART 3 - EXECUTION

3.01 PREPARATION

- A. Proof-roll prepared base material surface to check for unstable areas. The paving work shall begin after any unsuitable areas have been corrected and are ready to receive paving. Compaction testing for the base material shall be completed prior to the placement of the paving.
- B. Surface Preparation: Remove loose material from compacted base material surface to produce a firm, smooth surface immediately before placing concrete.

3.02 INSTALLATION

A. Form Construction

1. Set forms to required grades and lines, rigidly braced and secured.
2. Install sufficient quantity of forms to allow continuance of work and so that forms remain in-place a minimum of 24 hours after concrete placement.
3. Check completed formwork for grade and alignment to following tolerances:
 - a. Top of forms not more than 1/8 inch in 10-ft.
 - b. Vertical face on longitude axis, not more than 1/4 inch in 10-ft.
4. Clean forms after each use, and coat with form release agent as often as required to ensure separation from concrete without damage.

B. Concrete Placement

1. Comply with applicable requirements of ACI.
2. Do not place concrete until base material and forms have been checked for line and grade. Moisten base material if required to provide uniform dampened condition at time concrete is placed.
3. Place concrete using methods which prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Consolidate with care to prevent dislocation of

dowels, and joint devices.

4. Deposit and spread concrete in continuous operation between transverse joints, as far as possible. If interrupted for more than 2 hours, place construction joint. Automatic machine may be used for curb and gutter placement at Contractor's option. Machine placement must produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not acceptable, replace with formed concrete as specified.
5. Concrete placement shall be conducted in accordance with related ACI recommended procedures.

C. Joint Construction

1. Transverse Expansion Joints: Expansion joints shall be 20 feet on center, maximum and tooled or sawn control joints shall be 4 feet on center maximum.

D. Joint Fillers: Extend joint fillers full-width and depth of joint, and not less than 2 inches or more than 1 inch below finished surface where joint sealer is indicated. Furnish joint fillers in one-piece lengths for full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together.

E. Joint Sealants: All joints shall be sealed with approved exterior pavement joint sealants and shall be installed per manufacturer's recommendations.

3.03 CONCRETE FINISHING

- A. Work back top edge of integral curb, and formed joints with an edging tool, and round to a 2-inch radius. Eliminate tool marks on concrete surface. When excess moisture or surface sheen has disappeared, complete surface finishing as follows:
 1. Broom-finish by drawing fine-hair broom across surface perpendicular to line of traffic. Repeat operation as necessary to produce a fine line texture.
- B. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints and point up any minor honeycombed areas. Remove and replace areas or sections with major defects, as directed.
- C. Protect and cure finished concrete paving using acceptable moist-curing methods, more particularly described in the "water-curing" section of ACI 308-81.

3.04 BACKFILL

- A. After the concrete has set sufficiently, the spaces in the front and back of the curb shall be refilled to the required elevation with suitable material.

3.05 CLEANING AND ADJUSTING

- A. Wash free of stains, discolorations, dirt, and other foreign material just prior to final inspection.
- B. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials.

END OF SECTION

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SECTION 32 31 00
TEMPORARY AND PERMANENT CHAIN-LINK FENCE AND GATES

PART 1 - GENERAL

1.01 APPLICABLE REQUIREMENTS

- A. The Contract Drawings, and all other specification sections and other general conditions apply to this section.
- B. All work performed by the Contractor under this Contract shall comply with all applicable Federal, State and Local codes, laws, ordinances, regulations and guidelines for demolition work.

1.02 DESCRIPTION OF WORK

- A. The Contractor shall construct a chain link-fence colored hunter green with windscreen on top of jersey barrier totaling 8-foot in height around the site and gates at the locations shown on the Contract Drawings and as described herein. The temporary construction fencing shall be relocated as indicated on the Contract Drawings to remain on site as permanent fencing after project completion. The chain-link fencing and jersey barriers shall be accepted as the permanent fence after project completion provided it is still in a satisfactory condition. If the temporary chain-link fencing or jersey barriers are damaged during demolition, it shall be replaced at no cost to the City of New York prior to being accepted as the final permanent fence. New gates shall be installed post demolition as indicated on the Contract Drawings. It should also be noted that the existing concrete jersey barriers in good condition within the site can be re-used.

1.03 SUBMITTALS

The Contractor shall submit the following items to the Resident Engineer:

- A. Product data in the form of manufacturer's technical data, specifications, and installation instructions for fence and gate posts, fabric, gates and accessories.
- B. Shop Drawings showing location of gates and details of post installation, extension arms, gate swing, hardware and accessories.

1.04 QUALITY ASSURANCE

A. SINGLE SOURCE RESPONSIBILITY

The Contractor shall obtain chain link fences and gates as complete units, including necessary erection accessories, fittings and fastenings from a single source or manufacturer.

PART 2 - PRODUCTS

2.01 FABRIC

A. STEEL FABRIC (VINYL-COATED)

Comply with Chain Link Fence Manufacturers Institute (CLFMI) Product Manual. Furnish one-piece fabric widths for fencing up to 12 feet high. Wire size includes vinyl coating. Provide all new undamaged and unruled stock.

Size: 2-inch mesh, vinyl-coated, 9 gauge wire.

Color: Hunter green per the latest edition of the Building Code

2.02 FRAMING

A. STRENGTH REQUIREMENTS

Posts and rails shall conform to ASTM F 669.

B. PIPES

Pipes shall be straight, true to section, material and sizes specified and shall conform to the following weights per foot:

NPS in Inches	Outside Diameter (OD) in Inches	Type I Steel (#/ft)
1- 1/4	1.660	2.27
2	2.375	3.65
3	3.500	7.58
3-1/2	4.000	9.11
6	6.625	18.97

C. STEEL FRAMEWORK: GENERAL (POSTS, RAILS, BRACES AND GATE FRAMES)

Type I Pipe: Hot-dipped galvanized steel pipe conforming to ASTM F 1083, plain ends, standard weight (Schedule 40) with not less than 1.8 oz. zinc per sq ft of surface area coated.

Provide all members with holes where called for.

D. END, CORNER, AND PULL POSTS

3.0 inch O.D. Type I steel pipe.

E. LINE OR INTERMEDIATE POSTS

2.5 inch O.D. Type I steel pipe.

F. GATE POSTS

3.0 inch O.D. Type I steel pipe.

2.03 FITTINGS AND ACCESSORIES

A. MATERIAL

Comply with ASTM F626. Provide hot-dipped galvanized iron or steel, minimum 3/16-inch thick, to suit manufacturer's standards (No aluminum).

Zinc Coating: Galvanize steel fence fittings and accessories in accordance with ASTM A 153, with zinc weights as per ASTM A 153 Table 1.

All nuts, bolts, and other fastening devices shall be cadmium plated beyond nuts and shall be peened. Bolts shall not protrude more than 1/8-inch.

B. TIE WIRES

9 gauge hot dipped galvanized steel with a minimum of 0.80 oz. per sq ft of zinc coating of surface area in accordance with ASTM A 641, Class 3.

C. POST AND LINE CAPS

Provide weather tight closure cap for each post. Provide line post caps with loop to receive top rail. Attached post caps with a No. 9 Parker-Kalon, Type U, cadmium plated, 5/8-inch drive screw or equal.

D. TENSION OR STRETCHER BARS

Hot-dip galvanized steel with minimum length 2 inches less than full height of fabric, minimum cross-section of 3/16-inch by 3/4-inch and minimum 1.2 oz. zinc coating per sq ft of surface area. Provide one bar for each gate and end post, and two for each corner and pull post.

E. TENSION AND BRACE BANDS

Minimum 3/4-inch-wide hot-dip galvanized steel with minimum 1.2 oz. zinc coating per sq ft of surface area.

Tension Bands: Minimum 14 gauge (0.074 inch) thick
Tension and Brace Bands: Minimum 12 gauge (0.105 inch thick).

F. CONCRETE

Provide concrete consisting of Portland Cement, ASTM C150, aggregates ASTM C33, and clean water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 2,500 psi. Use at least 4 sacks of cement per cu yd, 1-inch maximum size aggregate, maximum 3-inch slump and 2 to 4 percent entrained air.

2.04 WINDSCREEN

- A. Windscreen fabric shall be the same height at the chain-link fencing. Windscreen shall be of an open mesh woven vinyl-coated polyester fabric (6/7 oz. per square yard) to provide an approximate 80% windbreak capability.
- B. Mesh fabric shall have a perimeter reinforcing hem with #2 solid brass grommets spaced every 18" (45.7cm) for securing to fencing. Center horizontal grommet flap on outside of mesh panel shall be provided to provide ease of installation, and to reduce wind affect on the fabric.
- C. Windscreen shall include heat-cut 8" x 10" rectangular reinforced, air vents on approximately 8'-0" centers.

2.05 GATES

A. FABRICATION

Fabricate perimeter frames of gates from 2.375-inch O.D. steel pipe and finish to match fence framework. Assemble gate frames by welding. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware, and accessories. Space frame members maximum of 6 feet apart unless otherwise indicated.

Provide same fabric as for fence. Install fabric with tension bars and bands at vertical edges and at top and bottom edges.

Install diagonal cross-bracing consisting of 3/8-inch diameter adjustable-length truss rods on gates to ensure frame rigidity without sag or twist.

PART 3 - EXECUTION

3.01 INSTALLATION

A. GENERAL

Install fence in compliance with ASTM F567. Install fence and accessories plumb, straight, and taut, and in compliance with manufacturer's recommendations. Apply fabric to outside

of framework. At no time shall fencing be permanently or temporarily anchored to existing structures to remain. Fence windscreen work shall be securely and professionally attached

B. SETTING POSTS (GATE POSTS)

Center and align posts using brackets on concrete Jersey barrier. Space a maximum of 8 feet o.c., unless otherwise indicated.

C. BRACE ASSEMBLIES

Install braces so posts are plumb when diagonal rod is under proper tension.

D. FABRIC

Leave approximately 2 inches between finish grade and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on security side of fence, and anchor to framework so that fabric remains with tension after pulling force is released.

E. TENSION OR STRETCHER BARS

Thread through clamp to fabric 5 inches o.c., and secure to end, corner, pull and gate posts with tension bands spaced not over 15 inches o.c.

F. TIE WIRES

Use U-shaped wire of proper length to secure fabric firmly to posts and rails with ends twisted at least 2 full turns. Bend ends of wire to minimize hazard to persons or clothing.

G. MAXIMUM SPACING

Tie fabric to line posts 12 inches o.c. and to rails and braces 24 inches o.c.

H. FASTENERS

Install nuts for tension bands and hardware bolts on side of fence opposite fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

I. GATES

Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.02 CLEANUP

- A. Upon the completion of the installation all debris created by the installation shall be removed from the premises.

3.03 MAINTENANCE OF FENCING

- A. The Contractor shall maintain the fencing during the life of the Contract. All debris accumulations along the fencing shall be removed. Any settlement, movement or misalignment of the fencing shall be corrected by resetting of posts and fabric at the completion of work.
- B. The Contractor shall make all repairs of damages to the fence resulting from vandalism.
- C. If necessary for the removal of site utilities beyond the construction fence line, the contractor will be required to roll back/remove and re-install portions of the construction fence during the course of the contract period.

3.04 FENCE OWNERSHIP

- A. Fence shall be relocated to final location as indicated on the Contract Drawings at the end of demolition. The chain-link fencing and jersey barriers shall be accepted as the permanent fence after project completion provided it is still in a satisfactory condition. If the temporary chain-link fencing or jersey barriers are damaged during demolition, it shall be replaced at no cost to the City of New York prior to being accepted as the final permanent fence.
- B. New gates shall be installed post demolition as indicated on the Contract Drawings.
- C. All installed fencing shall remain property of the City of New York.

END OF SECTION

REFERENCE BORING LOCATION PLANS AND BORING LOGS

**(as referenced per drawing "BI101 – Former Boring Location
Plan (For Reference)" prepared by Langan Engineering and
Environmental Services, Inc. dated 21 February, 2013)**

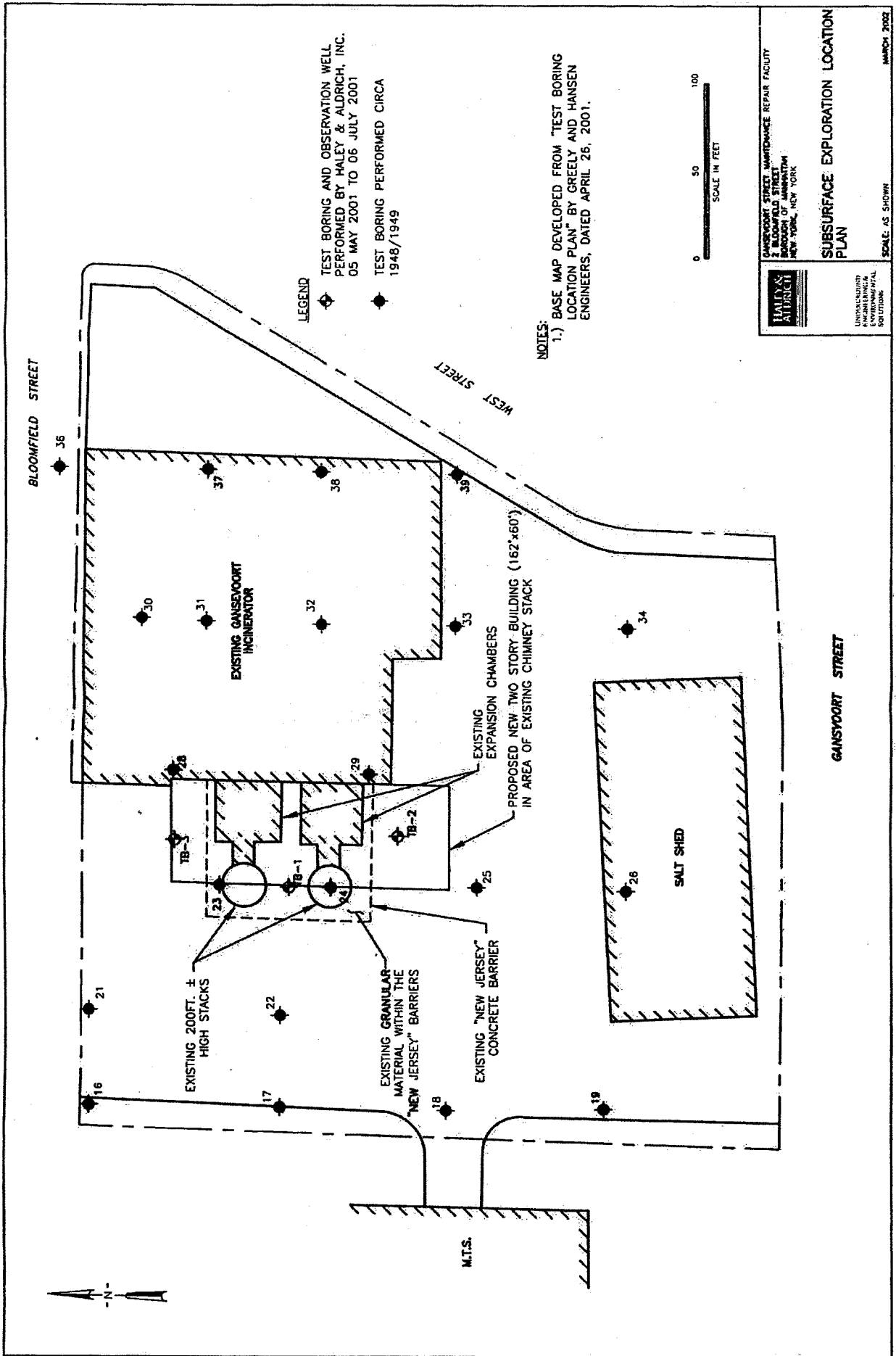


FIGURE 2



TEST BORING REPORT

Boring No. TB-1

Project Gansevoort St. Incinerator
Client Greeley and Hansen, Inc.
Contractor JBD

File No. 27700-000
Sheet No. 1 of 8
Start May 30, 2001
Finish June 1, 2001
Driller M. Lynch
H&A Rep. J. Knittel

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: CME-750 truck
Inside Diameter (in.)	6	1 3/8	2 1/8	Bit Type: Roller Bit
Hammer Weight (lb.)	140	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	30	30	-	Casing: driven
				Hoist/Hammer: Winch, Automatic Hammer

Elevation 5.5
Datum Manhattan Highway
Location See Plan

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel					Sand					Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength						
0	18	S-1	0.0	NO WELL INSTALLED	5.2		4" Asphalt																
	42	11	2.0		0.3		-Fill- Dense, gray, poorly-graded GRAVEL (GP), mps 1 in., dry. Class 11-65																
	22				4.5																		
	25				1.0																		
	10	S-2	2.0					-Fill- 60% silty SAND, 30% brick fragments, 10% ash particles, mps 0.5 in., dry. Class 11-65															
	13	13	4.0																				
	10																						
	6																						
	4	S-3	4.0			1.5		-Fill- Medium dense, brown, silty SAND. 5% brick particles, mps 4mm, trace vegetation, dry. Class 11-65	5	10	30	25	30										
5	5	12	6.0			4.0																	
	6																						
	17																						
	11	S-4	6.0			-0.5		-Fill- Medium dense, brown, silty SAND, 5% brick and ash particles, mps 0.5 in., dry. Class 11-65															
	8	12	8.0			6.0								5	30	30	30						
	9																						
	7																						
	6	S-5	8.0		-2.5		-Fill- Medium dense, brown, silty SAND, 5% brick cinder particles, 5% brick particles, mps 0.5 in., wet. Class 11-65	10	10	10	40	30											
	9	8	10.0		8.0																		
	8																						
	1																						
	10	S-6	10.0		-4.5		-Fill- Medium dense, tan, silty SAND with gravel, mps 0.75 in., wet. Class 11-65	25	30	20	10	15											
	8	12	11.2		10.0																		
	100/2																						

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to:		
			Bottom of Casing	Bottom of Hole	Water

Sample Identification

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon
- G Geoprobe

Well Diagram

- Riser Pipe
- Screen
- Filter Sand
- Cuttings
- Grout
- Concrete
- Bentonite Seal

Summary

Overburden (lin. ft.) 157.0
Rock Cored (lin. ft.) 5.0
Samples S1-S35, U1-U2, R-1

Boring No. TB-1

Field Tests:

Dilatancy: R-Rapid, S-Slow, N-None

Toughness: L-Low, M-Medium, H-High

Plasticity: N-Nonplastic, L-Low, M-Medium, H-High

Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

*SPT = Sampler blows per 6 in.

**Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil Identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

TEST BORING REPORT

Boring No. TB-1
 File No. 27700-000
 Sheet No. 2 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description <small>(Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)</small>	Gravel		Sand			Field Test				
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
15	3 4 3 4	S-7 12	15.0 17.0		-9.5 15.0		-Fill- Loose, gray, silty GRAVEL with sand, 5% brick and cinder particles, mps 0.5 in., slight odor, wet. Class 11-65	50	5	5	10	30					
20	5 9 6 7	S-8 20	20.0 22.0		-14.5 20.0		-Fill- Medium dense, black, silty SAND, 5% cinder and brick particles, mps 4mm, wet. Class 11-65		5	15	40	35					
25	2 1 1 1	S-9 10	25.0 27.0		-19.5 25.0		-Fill- 85% cinder fragments to particles, 10% silty sand, 5% fine gravel, mps 0.5 in., wet. Class 11-65										
30	3 1 WOR WOR	S-10 0	30.0 32.0		-24.5 30.0		No Recovery										
	P U S H	S-10 2	32.0 34.0		-26.5 32.0		-Fill- 80% cinder fragments to particles, 20% vegetation and peat, mps 0.75 in., wet. Class 11-65										
					-28.5 34.0	MH						10	90				
35	3 2 2 2	S-11 18	35.0 37.0				Soft, dark gray, elastic SILT (MH), wet. Class 11-65 unconfined compressive strength (qu) from pocket penetrometer (pp) = 0.75 TSF										

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*SPT = Sampler blows per 8 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.



TEST BORING REPORT

Boring No. TB-1
 File No. 27700-000
 Sheet No. 3 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
						MH												
40	WOH WOH WOH WOH	S-12 24	40.0 42.0		-34.5 40.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65				10	90	S	M	M	H		
45	WOH WOH WOH WOH	S-13 24	45.0 47.0		-39.5 45.0	MH	Very soft, dark gray elastic SILT (MH), wet. Class 11-65 qu from pp = 0.70 TSF				10	90						
	P U S H	U-1 24	47.0 49.0		-41.5 47.0	MH	Pushed Shelby Tube											
50	WOH WOH WOH WOH	S-14 24	49.0 51.0		-43.5 49.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 qu from pp = 0.7 TSF				10	90						
55	WOR WOR WOH WOH	S-15 24	55.0 57.0		-49.5 55.0	MH	Very soft, dark gray, elastic SILT with sand (MH), wet. Class 11-65 qu from pp = 0.75 TSF				15	85	S	M	M	H		
	P U S H	U-2 24	57.0 59.0		-51.5 57.0	MH	Pushed Shelby Tube											
		S-16	59.0		-53.5 59.0	MH	Very soft, dark gray, elastic SILT with sand (ML). Wet. Class 11-65				15	85						

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-1

TEST BORING REPORT

Boring No. TB-1
 File No. 27700-000
 Sheet No. 4 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel					Sand			Field Test			
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength		
60	WOR WOR WOR WOR	24	61.0			MH	qu from pp = 0.75 TSF												
65	WOR WOR WOR WOR	S-17 24	65.0 67.0		-59.5 65.0	MH	Very soft, dark gray, elastic SILT with sand (ML). Wet. Class 11-65						15	85					
70	WOH WOH WOH WOR	S-18 20	70.0 72.0		-64.5 70.0	MH	Very soft, dark gray, elastic SILT with sand (ML). Wet. Class 11-65 qu from pp = 1.0 TSF						15	85					
75	WOR WOR WOR WOR	S-19 24	75.0 77.0		-69.5 75.0	MH	Very soft, dark gray elastic SILT (ML). Wet. Class 11-65 qu from pp = 1.0 TSF						10	90					
80	WOR WOR WOR	S-20 24	80.0 82.0		-74.5 80.0	MH	Very soft, dark gray elastic SILT (MH). 5% organics and shells, wet. Class 11-65 qu from pp = 1.0 TSF						10	90					

O. B. TAYLOR/27700-000-004-01

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 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.



TEST BORING REPORT

Boring No. TB-1
 File No. 27700-000
 Sheet No. 5 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
	WOR					MH												
85	WOR WOR WOR WOR	S-21 24	85.0 87.0		-79.5 85.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65				5	95	S	M	M	H		
90	WOR WOR WOH WOH	S-22 24	90.0 92.0		-84.5 90.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65				10	90						
95	WOR WOR WOR	S-23 24	95.0 97.0		-89.5 95.0	MH	Very soft, dark gray, elastic SILT (MH), 5% organics, wet. Class 11-65				5	95						
100	WOR WOR WOR WOR	S-24 24	100.0 102.0		-94.5 100.0	MH	Very soft, dark gray, elastic SILT (MH). 5% organics/peat, wet. Class 11-65 qu from pp = 1.0 TSF				5	95	S	M	M	H		

G.O.A.T. 10/27/70 (CHANGE GP) Oct 2, 81

*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Halsey & Aldrich, Inc.

Boring No. TB-1



TEST BORING REPORT

Boring No. TB-1
 File No. 27700-000
 Sheet No. 6 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test				
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
-105	WOR WOR WOR WOR	S-25 23	105.0 107.0		-99.5 105.0	MH	Very soft, dark gray, elastic SILT (MH). 5% organics/peat, wet. Class 11-65				5	95	S	L	M	H	
-110	WOR WOR WOR WOH	S-26 24	110.0 112.0		-104.5 110.0	MH		qu from pp = 1.1 TSF				5	95	S	L	M	H
-115	WOR WOR WOR WOR	S-27 20	115.0 117.0		-109.5 115.0	MH		qu from pp = 1.25 TSF				100					
-120	WOR WOR WOR WOR	S-28 24	120.0 122.0		-114.5 120.0	MH		qu from pp = 1.25 TSF				100	N	S	L	M	H
-125	WOR WOR	S-29 20	125.0 127.0		-119.5 125.0	MH	qu from pp = 1.25 TSF				100	N		L	M	H	

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NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-1

TEST BORING REPORT

Boring No. TB-1
 File No. 27700-000
 Sheet No. 7 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand		Field Test							
								% Coarse	% Fine	% Coarse	% Medium	% Fine	Dilatancy	Toughness	Plasticity	Strength			
	WOR WOH					MH													
130	WOR WOR WOR WOR	S-30 22	130.0 132.0		-124.5 130.0	MH	Very soft, dark gray, elastic SILT (MH), 5% organics, wet. Class 11-65 qu from pp = 0.6 TSP											100	
135	WOR WOR WOR WOR	S-31 24	135.0 137.0		-129.5 135.0	MH	Very soft, dark gray, elastic SILT (MH), 5% organics, wet. Class 11-65												100
140	WOR WOR 23 25	S-32 24	140.0 142.0		-135.5 141.0	SM	Dense, gray, silty SAND (SM), wet. Class 7-65				80	20							
145	1 8 5 27	S-33 20	145.0 147.0		-139.5 145.0	SM	Medium dense, gray, silty SAND (SM), wet. Class 7-65				70	30							

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

TEST BORING REPORT

Boring No. TB-1
 File No. 27700-000
 Sheet No. 8 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test				
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
150	WOR 1 3 10	S-34 18	150.0 152.0		144.5 150.0	SM	Very loose, gray, silty SAND (SM), wet. Class 7-65			5	70	25					
165	WOR 8 18 100/3	S-35 10	155.0 156.8		149.5 155.0	SM		Medium dense, gray, poorly-graded SAND (SP). Mica particles, wet. Class 7-65 Roller bit indicated top of rock at 156.75. Begin coring at 157 ft.			10	80	10				
	8 min 9 min	R-1	157.0 162.0		151.5 157.0		Hard, slightly weathered, gray, mica dominated, quartz, garnet, SCHIST, foliation 90 degrees from horizontal plane. Recovery = 139.5/150 in = 93% RQD = 93%										
100	8 min 9 min							Boring terminated at 162.0 ft +- Groundwater estimated at 7.9' below ground surface during drilling and is approximate. Please refer to the water level measurements from observation wells installed in TB-2 and TB-3.									
	9 min				156.5 162.0												

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.



TEST BORING REPORT

Boring No. TB-2

Project Gansevoort St. Incinerator
 Client Greeley and Hansen, Inc.
 Contractor JBD

File No. 27700-000
 Sheet No. 1 of 8
 Start May 25, 2001
 Finish May 30, 2001
 Driller M. Lynch
 H&A Rep. J. Knittel

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rlg Make & Model: CME-750 truck
Inside Diameter (in.)	6	1 3/8	2 1/8	Bit Type: Roller Bit
Hammer Weight (lb.)	140	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	30	30	-	Casing: driven
				Hoist/Hammer: Winch, Automatic Hammer

Elevation 5.8
 Datum Manhattan Highway
 Location See Plan

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test						
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength		
0	80	S-1	0.0				20" Asphalt												
40	24	24	2.0																
42					4.1														
22					1.7														
	30	S-2	2.0		3.7		-Fill- Dense, gray, poorly-graded GRAVEL (GP). mps 0.75 in., dry, Class 11-65	10	80	10									
	25	22	4.0		2.1		-Fill- Very dense, brown, poorly-graded SAND (SP). 5% brick fragments. mps 0.75 in., dry, Class 11-65	10		10	40	30	5						
	28				1.8														
	35				4.0														
	9	S-3	4.0		4.0		-Fill- Medium dense, light brown, poorly-graded SAND with gravel (SP). 5% brick fragments. mps = 0.75 in., dry, Class 11-65	20	30	30	15	5							
5	15	12	6.0																
10	10																		
	14																		
	7	S-4	6.0		6.0		-Fill- Loose, brown, poorly-graded SAND with gravel (SP). mps 0.5 in., dry, Class 11-65	25	25	25	20	5							
	6	12	8.0																
	3																		
	5																		
	8	S-5	8.0		7.9		-Fill- Medium dense, gray, poorly-graded GRAVEL (GP). mps 1.0 in., wet, Class 11-65	100											
	10	2	10.0																
	16																		
	9																		
10	6	S-6	10.0		10.0		-Fill- Loose to medium dense, dark brown, poorly-graded GRAVEL (GP). mps 0.5 in., wet, Class 11-65	80			10								
	6	8	12.0																
	5																		
	1																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to:		
			Bottom of Casing	Bottom of Hole	Water
5-25-01	15:00	none	25	50	8.0
5-31-01	13:45	24	15.1		7.85
6-01-01	11:45	44	15.1		7.71

Sample Identification

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon
G	Geoprobe

Well Diagram

	Riser Pipe
	Screen
	Filter Sand
	Cuttings
	Grout
	Concrete
	Bentonite Seal

Summary

Overburden (lin. ft.) 154
 Rock Cored (lin. ft.) 5.0
 Samples S1-S34, U1-U6, R-1

Boring No. TB-2

Field Tests:

Dilatancy: R-Rapid, S-Slow, N-None
 Toughness: L-Low, M-Medium, H-High

Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
 Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

*SPT = Sampler Blows per 6 in.

**Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil Identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

Boring No. TB-2
 File No. 27700-000
 Sheet No. 2 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test						
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength		
15	4 2 2 2	S-7 18	15.0 17.0		-9.2 15.0		-Fill- 80% cinder fragments to particles, 15% brick fragments, 5% organics, mps 0.75 in., wet. Class 11-65												
20	2 2 13 10	S-8 16	20.0 22.0		-14.2 20.0		-Fill- 80% cinder fragments to particles, 20% vegetation. mps 0.5 in., wet. Class 11-65												
25	1 2 1 WOH	S-9 3	25.0 27.0		-19.2 25.0		-Fill- 70% cinder fragments, 20% fine gravel, 10% organics. mps 0.5 in. cinder., wet. Class 11-65												
30	I I I I	S-10 1	30.0 32.0		-24.2 30.0		No Recovery												
	P U S H	S-10 2	32.0 34.0		-26.2 32.0		-Fill- 70% cinder particles, 10% brick particles, 10% ash particles, 10% silty gravel, mps 0.75 in. brick, wet. Class 11-65												
35	WOH WOH WOH WOH	S-11 14	35.0 37.0		-29.7 35.5	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65						10	90					
					-31.2														

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-2

TEST BORING REPORT

Boring No. TB-2
 File No. 27700-000
 Sheet No. 3 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test				
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
40	P U S H	U-1 11	37.0 39.0		37.0	MH	Similar to S-11										
	WOH WOH 1 1	S-12 18	39.0 41.0		-33.2 39.0	MH	Similar to S-11				10	90	S	L	M	H	
45	1 1 1 1	S-13 10	45.0 47.0		-39.2 45.0	MH	Similar to S-11 Attempted a tube sample at 47.0' but the tube was lost in the hole. Drilling was continued and pushed the tube aside at 57.0'.				10	90					
	1 WOH 1 1	S-14 14	50.0 52.0		-44.2 50.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 qu from pp = 0.0 TSF				10	90					
55	9 S S S	S-15 13	55.0 57.0		-49.2 55.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 Note: The split-spoon hit the abandoned tube and pushed it aside. Blow counts are unreliable for this sample.				10	90	S	L	M	H	

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil Identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.



TEST BORING REPORT

Boring No. TB-2
 File No. 27700-000
 Sheet No. 4 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description <small>(Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)</small>	Gravel		Sand		Field Test										
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength					
60	1	S-16	60.0		-54.2	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65															
	1	13	62.0		60.0	MH					10	90										
	1																					
	1																					
65	1	S-17	65.0		-59.2	MH	Very soft, dark gray, elastic SILT with sand (ML), wet. Class 11-65															
	1	20	67.0		65.0	MH					15	85										
	W O H																					
	P U S H	U-2	67.0		-61.2	MH	Pushed Shelby tube															
		20	69.0		67.0																	
70	1	S-18	69.0		-63.2	MH	Similar to S-17															
	1	21	71.0		69.0	MH					15	85	S	L	M	H						
	W O H																					
	1																					
76	W O R	S-19	75.0		-69.2	MH	Very soft, dark gray, elastic SILT with sand (MH), wet. Class 11-65 qu from pp = 1.6 TSF Occasional small seashells.															
		24	77.0		75.0	MH					20	80										
	P U S H	U-3	77.0		-71.2	MH	Pushed Shelby tube															
		16	79.0		77.0																	
80	W O R	S-20	79.0		-73.2	MH	Very soft, dark gray, elastic SILT with sand (MH), wet. Class 11-65															
	2	24	81.0		79.0	MH					25	75										
	3																					

60-01-TA-2770000-000-004 Oct 9, 01

*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-2



TEST BORING REPORT

Boring No. TB-2
 File No. 27700-000
 Sheet No. 5 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test						
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength		
						MH													
85	WOR WOR WOR WOR	S-21 21	85.0 87.0		-79.2 85.0	MH	Very soft, dark gray, elastic SILT with sand (MH). Occasional small shells, wet. Class 11-65 qu from pp = 0.90 TSF					15	85	S	L	M	H		
90	WOR WOR WOR WOR	S-22 24	90.0 92.0		-84.2 90.0	MH	Very soft, dark gray, elastic SILT with sand (MH), wet. Class 11-65 qu from pp = 0.60 TSF					25	75						
	P U S H	U-4 24	92.0 94.0		-86.2 92.0	MH	Pushed Shelby tube												
95	WOR WOR WOR WOR	S-23 20	94.0 96.0		-88.2 94.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 qu from pp = 1.1 TSF					10	90						
100	WOR WOR WOR WOR	S-24 24	100.0 102.0		-94.2 100.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 qu from pp = 1.1 TSF					5	95						

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-2

TEST BORING REPORT

Boring No. TB-2
File No. 27700-000
Sheet No. 6 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
-105	WOR WOR 1 1	S-25 24	105.0 107.0		-99.2 105.0	MH MH	Very soft, dark gray, elastic SILT (MH). 5% organics/peat, wet. Class 11-65				5	95						
-110	WOR 1 1 1	S-26 24	110.0 112.0		-104.2 110.0	MH	Very soft, dark gray, elastic SILT (MH). 5% organics/peat, wet. Class 11-65 qu from pp = 1.2 TSF				5	95						
	P U S H	U-5 21	112.0 114.0			MH	Similar to S-26											
-115	WOR 3 3 4	S-27 24	115.0 117.0		-108.2 114.0 -109.2 115.0	MH	Very soft, dark gray, elastic SILT (MH), 5% organics/peat, wet. Class 11-65 qu from pp = 1.0 TSF				5	95	S	L	M	H		
-120	WOR WOR WOR 4	S-28 24	120.0 122.0		-114.2 120.0	MH	Very soft, dark gray, elastic SILT (ML), 5% organics/peat, wet. Class 11-65				5	95						
-125	WOR WOR	S-29 24	125.0 127.0		-119.2 125.0	MH	Very soft, dark gray, elastic SILT (ML), 5% wood particles and plant fibers, wet. Class 11-65				5	95						

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

TEST BORING REPORT

Boring No. TB-2
File No. 27700-000
Sheet No. 7 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
	2 5					MH												
130	WOR WOR WOR 2	S-30 24	130.0 132.0		-124.2 130.0	MH	Very soft, dark gray, elastic SILT (ML), 5% organics, wet. Class 11-65				5	95						
	P U S H	U-6 21.5	132.0 134.0		-126.2 132.0	MH	Similar to S-30											
135	WOR WOR 4 4	S-31 24	134.0 136.0		-128.2 134.0	MH	Very soft, dark gray, elastic SILT (MH), 5% wood fragments and organics, wet. Class 11-65 qu from pp = 1.0 TSF				5	95						
140	WOR 2 3 3	S-32 24	140.0 142.0		-134.2 140.0	MH	Medium stiff, dark gray, elastic SILT (MH), wet. Class 11-65				5	95	S	L	M	H		
145	12 18 19 16	S-33 20	145.0 147.0		-139.2 145.0	MH	Hard, gray, sandy SILT (MH), wet. Class 11-65				40	60						

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-2

TEST BORING REPORT

Boring No. TB-2

File No. 27700-000

Sheet No. 8 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
					-144.2	MH												
150	8 9 9 9	S-34 18	150.0 152.0		150.0	SM	Medium dense, gray, silty SAND (SM), wet. Class 7-65			45	40	15						
					-146.7 152.5		Roller bit indicated top of rock at 152.5 ft. Advanced hole to 154 ft. and began rock core.											
155	7.5min 8.5min 9min 7min 7min	R-1	154.0 159.0		-148.2 154.0		Hard, slightly weathered, gray, mica dominated, quartz, garnet, SCHIST, foliation 90 degrees from horizontal plane. Recovery $145.5/150 \text{ in} = 97\%$ RQD = 97%											
					-153.2 159.0		Boring terminated at 159.0 ft +-.											

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*SPT = Sampler blows per 8 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-2



TEST BORING REPORT

Boring No. TB-3

Project Gansevoort St. Incinerator
 Client Grecey and Hansen, Inc.
 Contractor JBD

File No. 27700-000
 Sheet No. 1 of 8
 Start June 1, 2001
 Finish June 5, 2001
 Driller M. Lynch
 H&A Rep. J. Knittel

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: CME-750 truck
Inside Diameter (in.)	6	1 3/8	2 1/8	Bit Type: Roller Bit
Hammer Weight (lb.)	140	140	-	Drill Mud: Bentonite
Hammer Fall (in.)	30	30	-	Casing: driven
				Hoist/Hammer: Winch, Automatic Hammer

Elevation 4.7
 Datum Manhattan Highway
 Location See Plan

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test		
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness
0					4.2		6" Asphalt								
31	18		2.0		0.5		-Fill- Very dense, light gray, GRAVEL, moist, Class 11-65								
21															
15															
19	S-2	12	2.0		2.0		-Fill- 70% silty Sand, 20% brick fragments to particles, 10% cinders, moist, Class 11-65								
21			4.0												
18															
15															
13	S-3	12	4.0		4.0		-Fill- 60% silty SAND, 35% brick fragments to particles, 5% cinders, moist, Class 11-65								
9			6.0												
8															
8															
2	S-4	2	6.0		6.0		-Fill- 50% silty SAND, 30% ash particles, 20% gravel moist, Class 11-65								
1			8.0												
3															
2															
1	S-5	4	8.0		8.0		-Fill- Very loose brown, silty SAND, 5% brick particles, wet, Class 11-65			5	10	60	20		
1			10.0												
2															
3															
19	S-6	12	10.0		10.0		Refusal of split spoon on obstruction. Recovered wood with creosote odor. Roller bitted through wood to 13.5-ft. Roller bit indicated concrete obstruction from 13.5 to 14.5-ft.								
35			12.0												
50/0															

Water Level Data				Sample Identification			Well Diagram			Summary					
Date	Time	Elapsed Time (hr.)	Depth (ft.) to:	O	T	U	S	G	Riser Pipe	Screen	Filter Sand	Cuttings	Grout	Concrete	Bentonite Seal
			Bottom of Casing												
6-5-01	11:30	1	15	6.2											
6-5-01	12:30	2	15	6.1											

Overburden (lin. ft.) 150.5
 Rock Cored (lin. ft.) 5.0
 Samples S1-S34, R-1

Boring No. TB-3

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
 Toughness: L-Low, M-Medium, H-High
 Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
 Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation with the limitations of sampler size.

Note: Soil Identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

Boring No. TB-3
 File No. 27700-000
 Sheet No. 2 of 8

Depth (ft.)	SPT*	Sample No & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptors, geologic interpretation)	Gravel		Sand		Field Test						
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
15	4 3 2 3	S-7 0	15.0 17.0		-10.3 15.0		No recovery in split spoon											
	PUSH	S-7A 2	17.0 19.0		-12.3 17.0		Pushed split spoon to recover sample -Fill- 60% Cinders, 20% coarse sand, 15% silt, 5% organic material, creosote odor, wet. Class 11-65											
20	10 9 4 4	S-8 8	20.0 22.0		-15.3 20.0		-Fill- 80% black cinders fragments to particles, 20% ash particles, wet. Class 11-65											
25	5 2 1 1	S-9 10	25.0 27.0		-20.3 25.0		-Fill- 50% cinders, 50% ash, wet. Class 11-65											
30	2 2 1	S-10 18	30.0 32.0		-25.3 30.0 25.8 30.5	MH	Top 6-in of spoon fill similar to S-17 Class 11-65 Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 Unconfined compressive strength (qu) from pocket penetrometer (pp) = 0.6 tsf					5	95	S	L	M	H	
35	WOH WOH 1 1	S-11 24	35.0 37.0		30.3 35.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 qu from pp = 0.75 tsf					5	95					

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*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-3

TEST BORING REPORT

Boring No. TB-3
 File No. 27700-000
 Sheet No. 3 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (In.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test						
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength		
						MH													
40	WOH WOH 2 1	S-12 0	40.0 42.0		-35.3 40.0	MH	No recovery in split spoon.				20	80	S	L	M	H			
	PUSH	S-12A 18	42.0 44.0		-37.3 42.0	MH	Pushed split spoon to recover sample Very soft, dark gray elastic SILT (MH), with sand, wet. Class 11-65												
					-39.3 44.0														
45	WOR WOR WOH WOH	S-13 22	45.0 47.0			MH	Very soft, dark gray, elastic SILT (MH), 5% organics, shells, wet. Class 11-65				5	95							
50	WOR WOR WOH WOH	S-14 24	50.0 52.0		-45.3 50.0	MH	Very soft dark gray, elastic SILT (MH), with sand, wet. Class 11-65 qu from pp= 0.6 tsf				15	85	S	L	M	H			
55	W O R	S-15 24	55.0 57.0		-50.3 55.0	MH	Very soft dark gray, elastic SILT (MH), with sand, 5% organics, wet. Class 11-65				15	85							

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*SPT = Sampler blows per 6 In. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.



TEST BORING REPORT

Boring No. TB-3
 File No. 27700-000
 Sheet No. 4 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test			
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity
60	W O R	S-16 24	60.0		-55.3	MH	Similar to S-15					15	85	L	M	H
			62.0		60.0	MH										
65	W O R	S-17 20	65.0		-60.3	MH	Similar to S-15 qu from pp = 0.75 tsf					15	85			
			67.0		65.0	MH										
70	W O H	S-18 24	70.0		-65.3	MH	Very soft, dark gray, elastic SILT with sand (MH), wet. Class 11-65 qu from pp = 0.4 tsf					15	85	R	L	M
			72.0		70.0	MH										
75	W O H	S-19 24	75.0		-70.3	MH	Very soft, dark gray, elastic SILT with sand (MH), wet. Class 11-65 qu from pp = 0.6 tsf					15	85			
			77.0		75.0	MH										
80	W O H	S-20 24	80.0		-75.3	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 qu from pp = 0.25 tsf					5	95	R	L	M
			82.0		80.0	MH										

GSDATA27700GANSR.GPJ Oct 2, 01

*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-3



TEST BORING REPORT

Boring No. TB-3
 File No. 27700-000
 Sheet No. 5 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand		Field Test								
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength			
						MH														
85	W O R	S-21 24	85.0 87.0		-80.3 85.0	MH	Similar to S-20				5		95							
90	W O H	S-22 24	90.0 92.0		-85.3 90.0	MH	Very soft, dark gray, elastic SILT (MH), wet. Class 11-65 qu from pp = 0.2 tsf				10		90							
95	W O R	S-23 24	95.0 97.0		-90.3 95.0	MH	Very soft, dark gray, elastic SILT (MH), some organics, wet. Class 11-65 qu from pp = 0.6 tsf				5		95	S	L	M	H			
100	W O R	S-24 24	100.0 102.0		-95.3 100.0	MH	Very soft, dark gray, elastic SILT (MH), 20% organics, wet. Class 11-65 qu from pp = 1.2 tsf				5		95							

G:\DATA\27700\27700\GANSSE.GPJ Cdl 2 01

*SPT = Sampler blows per ft in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-3



TEST BORING REPORT

Boring No. TB-3
 File No. 27700-000
 Sheet No. 6 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description <small>(Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)</small>	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy*	Toughness	Plasticity	Strength	
105	WOR 1 2 1	S-25 22	105.0		100.3	MH												
			107.0		105.0	MH	Soft, dark gray, elastic SILT (MH), 5% organics, wet. Class 11-65 qu from pp = 0.9 tsf											100
110	WOR 2 4 4	S-26 24	110.0		105.3	MH												
			112.0		110.0	MH	Med stiff, dark gray elastic SILT (MH), 10% wood fragments and peat, wet. Class 11-65											
115	1 WOH 1 WOH	S-27 24	115.0		110.3	MH												
			117.0		115.0	MH	Very soft, dark gray, elastic SILT (MH), 5% organics and wood fragments, wet. Class 11-65											
120	W O H	S-28 24	120.0		115.3	MH												
			122.0		120.0	MH	Very Soft, dark gray, elastic SILT (MH), 5% organics, wet. Class 11-65											
125	W O	S-29 20	125.0		120.3	MH												
			127.0		125.0	MH	Similar to S-28											

GLDATA70770504USE.DRW Csl 2.01

*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-3



TEST BORING REPORT

Boring No. TB-3
 File No. 27700-000
 Sheet No. 7 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description <small>(Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)</small>	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
	R					MH												
130	W O R	S-30 24	130.0 132.0		-125.3 130.0	SM	Very soft dark gray gray elastic SILT (MH), 5% organics, wet. Class 11-65 qu from pp = 0.80 tsf											
135	W O R	S-31 23	135.0 137.0		-130.3 135.0	SM	Very soft, dark gray, elastic SILT, 5% organics, wet. Class 11-65											
140	20 27 28 24	S-32 24	140.0 142.0		-135.3 140.0	SM	Very dense, dark gray, silty SAND(SM), wet. Class 7-65											
145	3 5 7 14	S-33 24	145.0 147.0		-140.3 145.0		Medium dense, gray, silty SAND(SM), wet. Class 7-65											

G-104747/27700-000-007 Oct 2, 01

*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB-3

TEST BORING REPORT

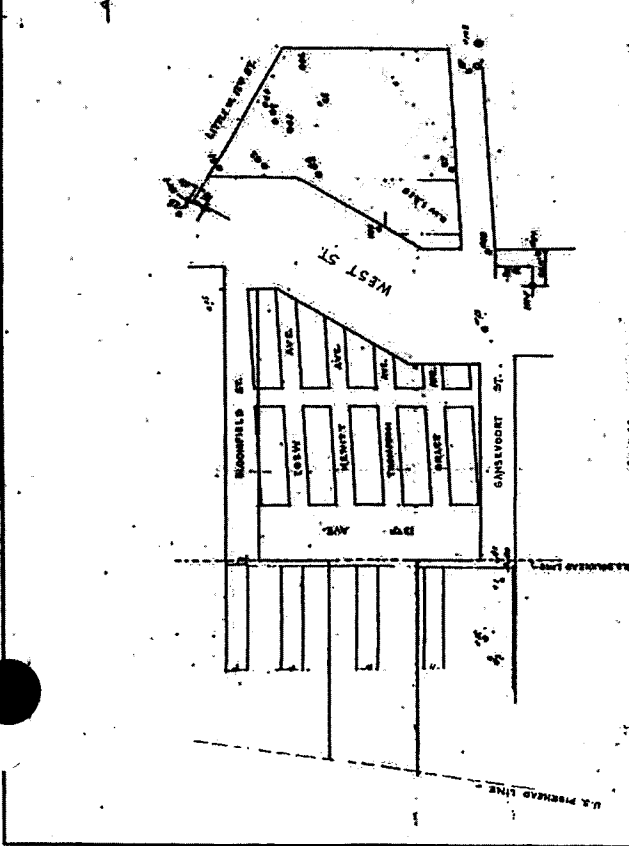
Boring No. TB-3
 File No. 27700-000
 Sheet No. 8 of 8

Depth (ft.)	SPT*	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size**, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
150	8.5 min	R-1	150.0 155.0		-145.3 150.0 145.8 150.5		Refusal of split spoon. Began rock coring at 150.5'. Hard, slightly weathered, gray, mica dominated, quartz, garnet, SCHIST, foliation 90 degrees from horizontal plane. Recovery = 139.5/150 in = 93% RQD = 93%											
155					-150.8 155.5		Boring terminated at 155.5' +/-.											

G:\DATA\27700\ANSE.GPJ Oct 2, 01

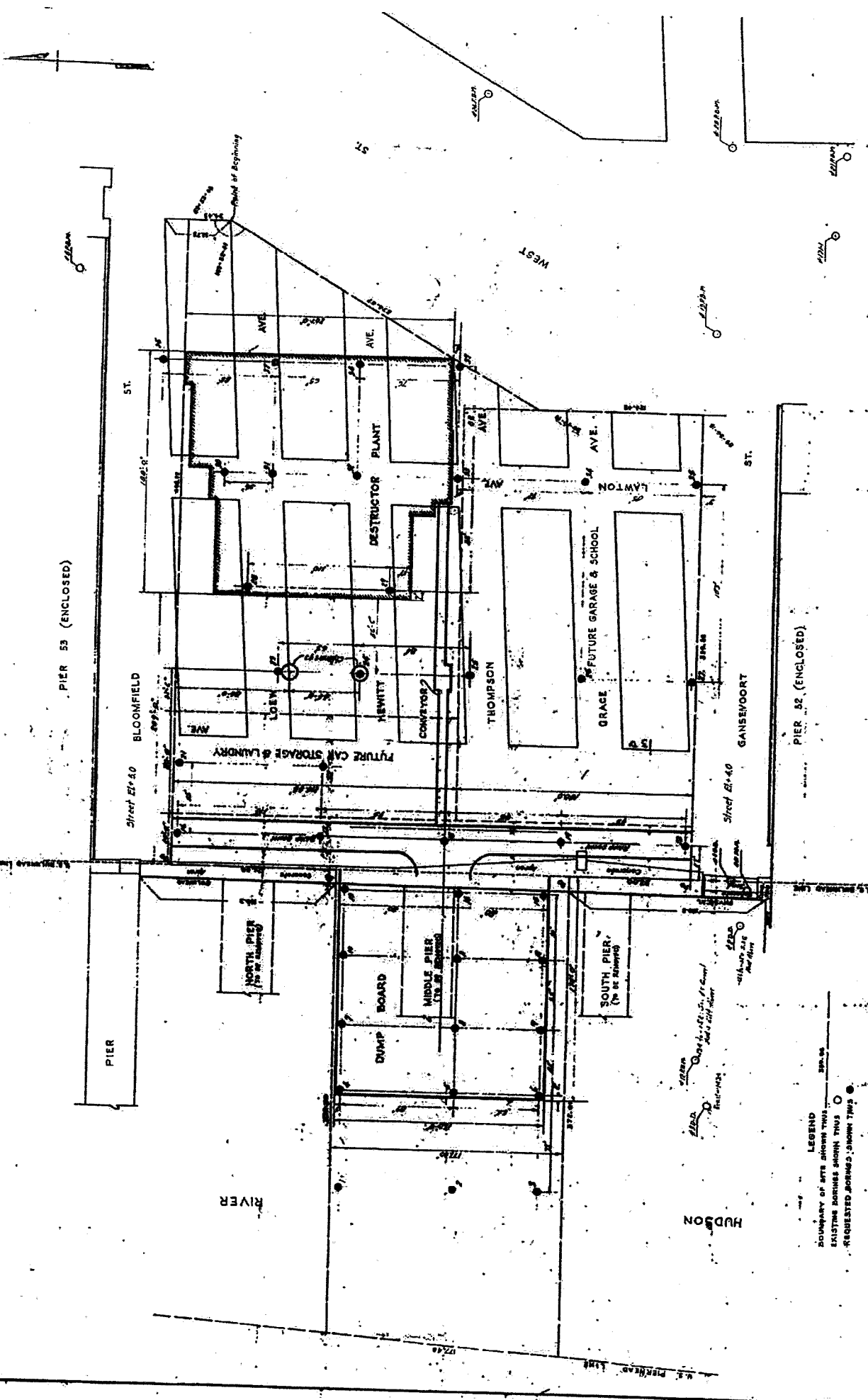
*SPT = Sampler blows per 6 in. **Maximum particle size is determined by direct observation within the limitations of sampler size.
 NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORINGS SOURCE OF DATA	
101 & 102	Subsurface Utility No.
103 & 104	Subsurface Utility No.
105 & 106	Subsurface Utility No.
107 & 108	Subsurface Utility No.
109 & 110	Subsurface Utility No.
111 & 112	Subsurface Utility No.
113 & 114	Subsurface Utility No.
115 & 116	Subsurface Utility No.
117 & 118	Subsurface Utility No.
119 & 120	Subsurface Utility No.
121 & 122	Subsurface Utility No.
123 & 124	Subsurface Utility No.
125 & 126	Subsurface Utility No.
127 & 128	Subsurface Utility No.
129 & 130	Subsurface Utility No.
131 & 132	Subsurface Utility No.
133 & 134	Subsurface Utility No.
135 & 136	Subsurface Utility No.
137 & 138	Subsurface Utility No.
139 & 140	Subsurface Utility No.
141 & 142	Subsurface Utility No.
143 & 144	Subsurface Utility No.
145 & 146	Subsurface Utility No.
147 & 148	Subsurface Utility No.
149 & 150	Subsurface Utility No.
151 & 152	Subsurface Utility No.
153 & 154	Subsurface Utility No.
155 & 156	Subsurface Utility No.
157 & 158	Subsurface Utility No.
159 & 160	Subsurface Utility No.
161 & 162	Subsurface Utility No.
163 & 164	Subsurface Utility No.
165 & 166	Subsurface Utility No.
167 & 168	Subsurface Utility No.
169 & 170	Subsurface Utility No.
171 & 172	Subsurface Utility No.
173 & 174	Subsurface Utility No.
175 & 176	Subsurface Utility No.
177 & 178	Subsurface Utility No.
179 & 180	Subsurface Utility No.
181 & 182	Subsurface Utility No.
183 & 184	Subsurface Utility No.
185 & 186	Subsurface Utility No.
187 & 188	Subsurface Utility No.
189 & 190	Subsurface Utility No.
191 & 192	Subsurface Utility No.
193 & 194	Subsurface Utility No.
195 & 196	Subsurface Utility No.
197 & 198	Subsurface Utility No.
199 & 200	Subsurface Utility No.



Boring No.	Soil Description	Depth (ft)	Notes
68	10' Sand & Gravel	10	
69	10' Sand & Gravel	10	
70	10' Sand & Gravel	10	
71	10' Sand & Gravel	10	
72	10' Sand & Gravel	10	
73	10' Sand & Gravel	10	
74	10' Sand & Gravel	10	
75	10' Sand & Gravel	10	
76	10' Sand & Gravel	10	
77	10' Sand & Gravel	10	
78	10' Sand & Gravel	10	
79	10' Sand & Gravel	10	
80	10' Sand & Gravel	10	
81	10' Sand & Gravel	10	
82	10' Sand & Gravel	10	
83	10' Sand & Gravel	10	
84	10' Sand & Gravel	10	
85	10' Sand & Gravel	10	
86	10' Sand & Gravel	10	
87	10' Sand & Gravel	10	
88	10' Sand & Gravel	10	
89	10' Sand & Gravel	10	
90	10' Sand & Gravel	10	
91	10' Sand & Gravel	10	
92	10' Sand & Gravel	10	
93	10' Sand & Gravel	10	
94	10' Sand & Gravel	10	
95	10' Sand & Gravel	10	
96	10' Sand & Gravel	10	
97	10' Sand & Gravel	10	
98	10' Sand & Gravel	10	
99	10' Sand & Gravel	10	
100	10' Sand & Gravel	10	

By: _____
 Title: _____
 Date: _____
 Scale: _____
 Sheet: _____



PIER 53 (ENCLOSED)

PIER 52 (ENCLOSED)

CITY OF NEW YORK
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF SEWAGE DISPOSAL DESIGN
 GANSEVOORT DESTROYER PLANT - M
 FOR THE DEPARTMENT OF SANITATION
 BORINGS.

DATE MAY 28 1939
 SHEET 1

LEGEND
 BOUNDARY OF SITE SHOWN THIS
 EXISTING BORINGS SHOWN THIS
 REQUESTED BORINGS SHOWN THIS

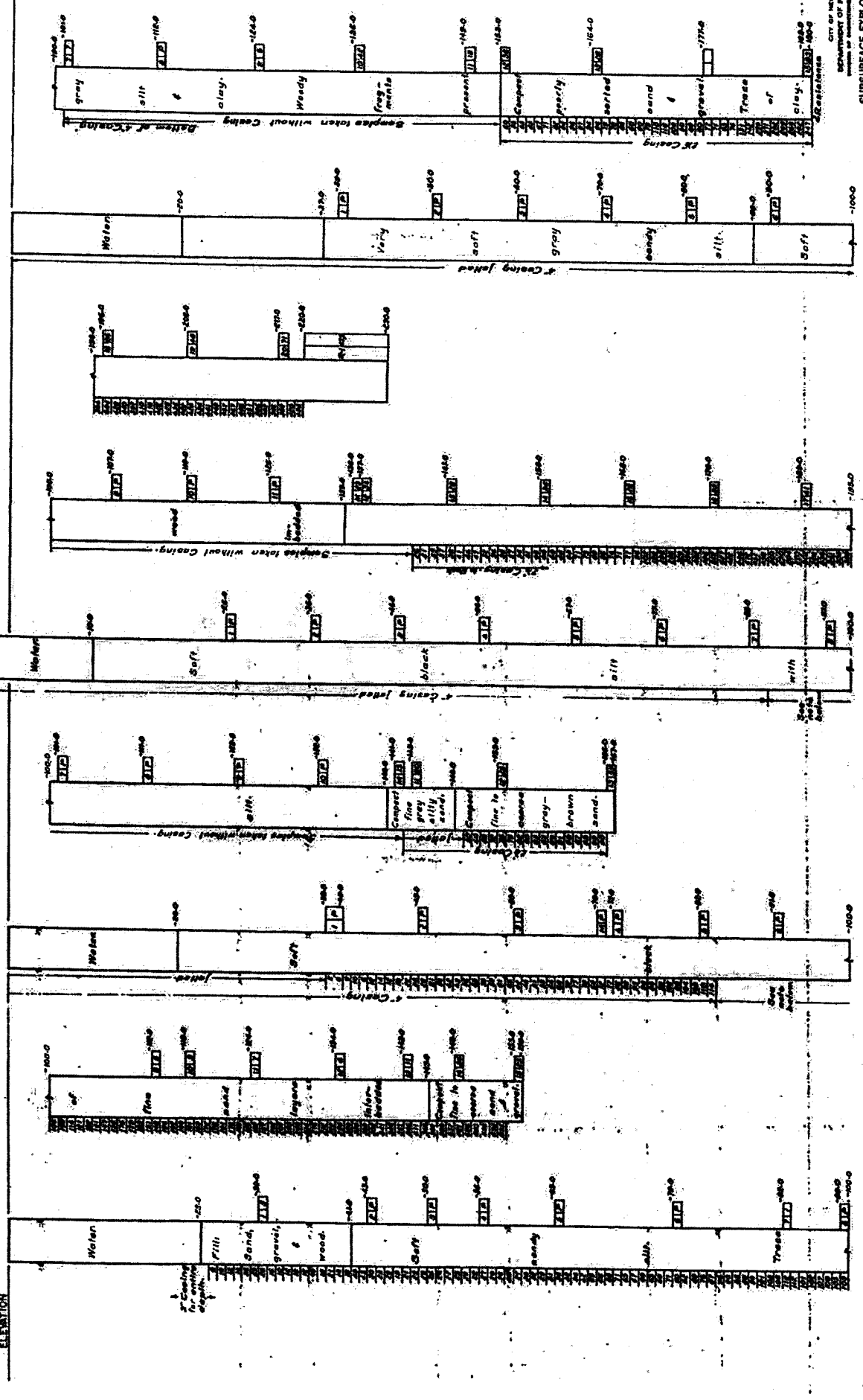
By: J. M. ...
 In: J. M. ...
 Date: ...

ELEVATION

2-1

Top of Plat. Elev. +40

4

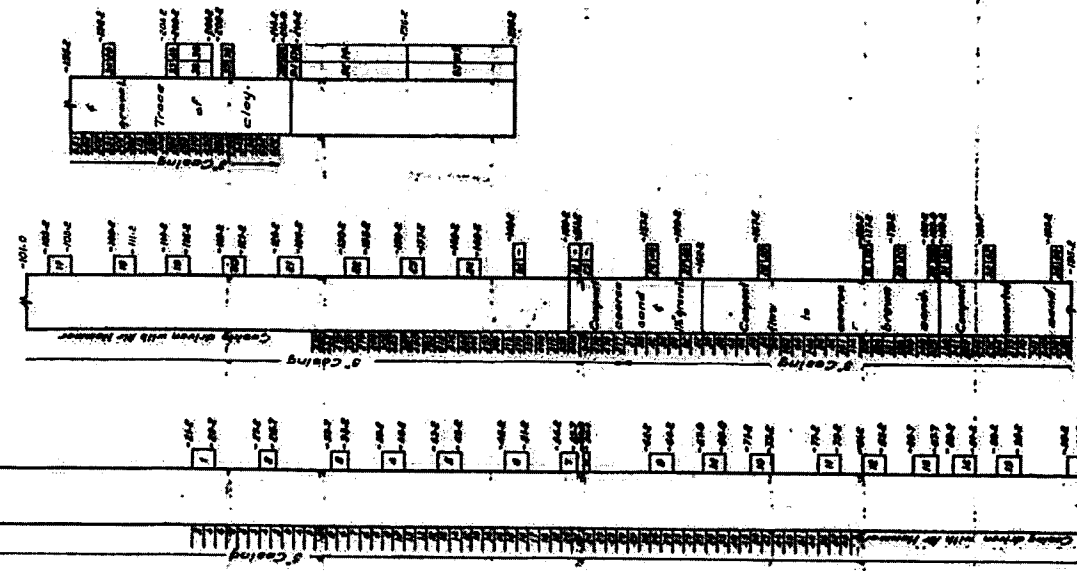


CITY OF NEW YORK
 DEPARTMENT OF PUBLIC WORKS
 RECORD OF BORINGS
 SUBSURFACE EXPLORATION SECT

ELEVATION

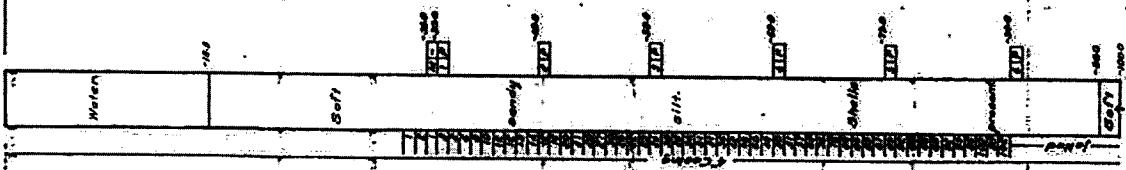
-6-

Top of Pier Elev +30

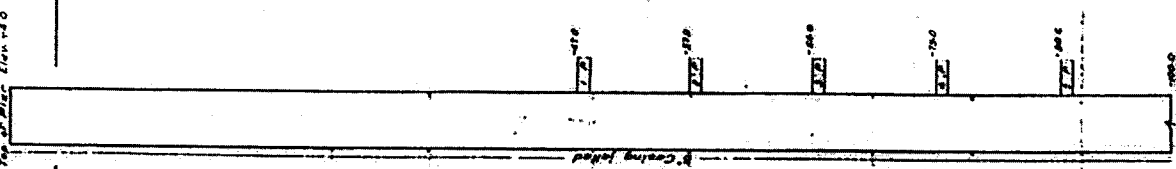


Note: Soil classification of samples taken at elevations (+) and (-) as indicated by the Soil Engineering Laboratory

7



8



ENGINEERING RECORD
 RECORD OF BORINGS

1911

RECORD OF BORINGS

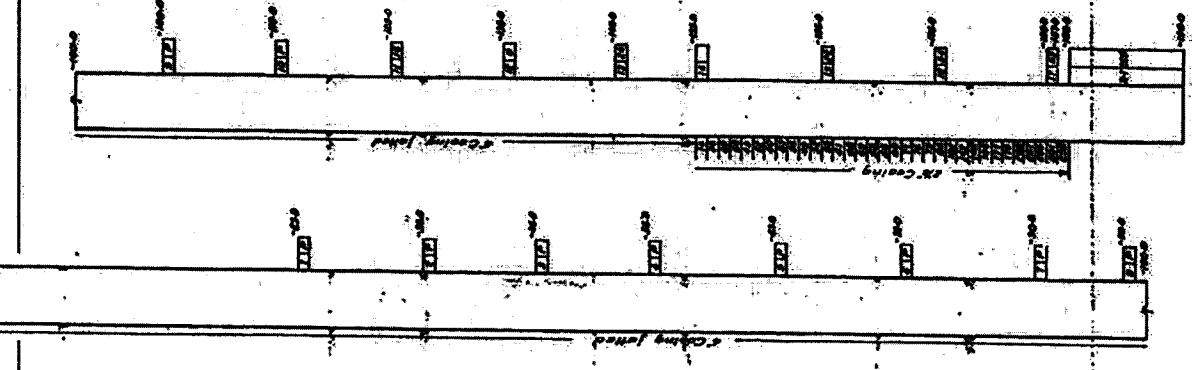
1911

1911

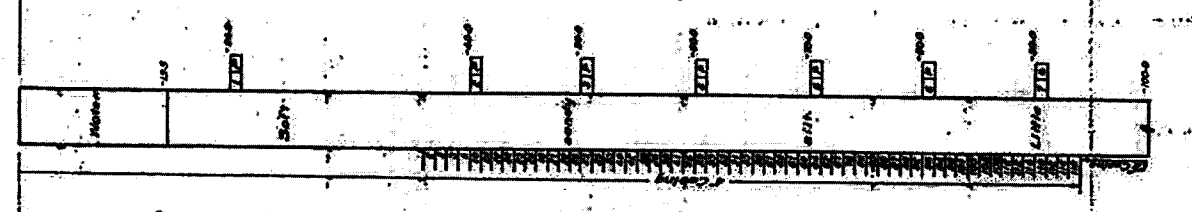
ELEVATION

9

Top of Pipe Elev=140

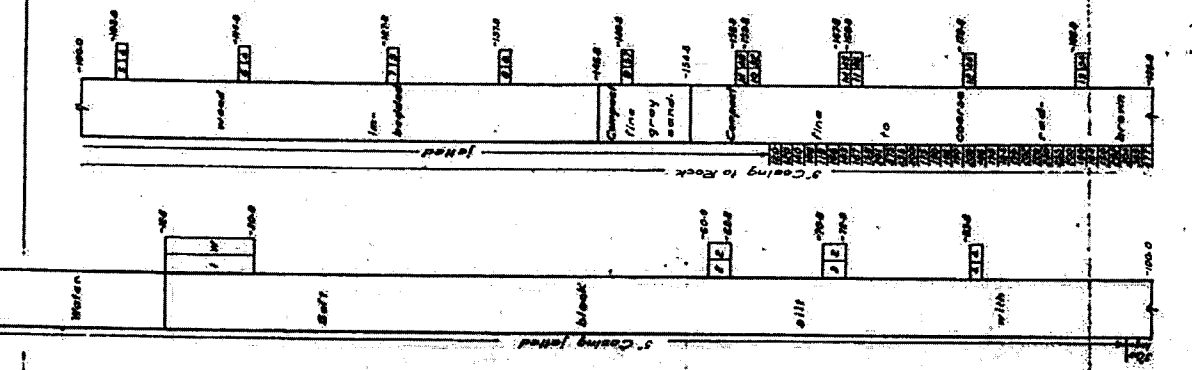


10



11

Top of Pipe Elev=142



DATE OF TEST
 NAME OF ENGINEER
 SUBSURFACE EXPLORATION SI
 RECORD OF BORING

SHEET OF

RECORD OF BORING

DATE OF TEST

NAME OF ENGINEER

SUBSURFACE EXPLORATION SI

RECORD OF BORING

16

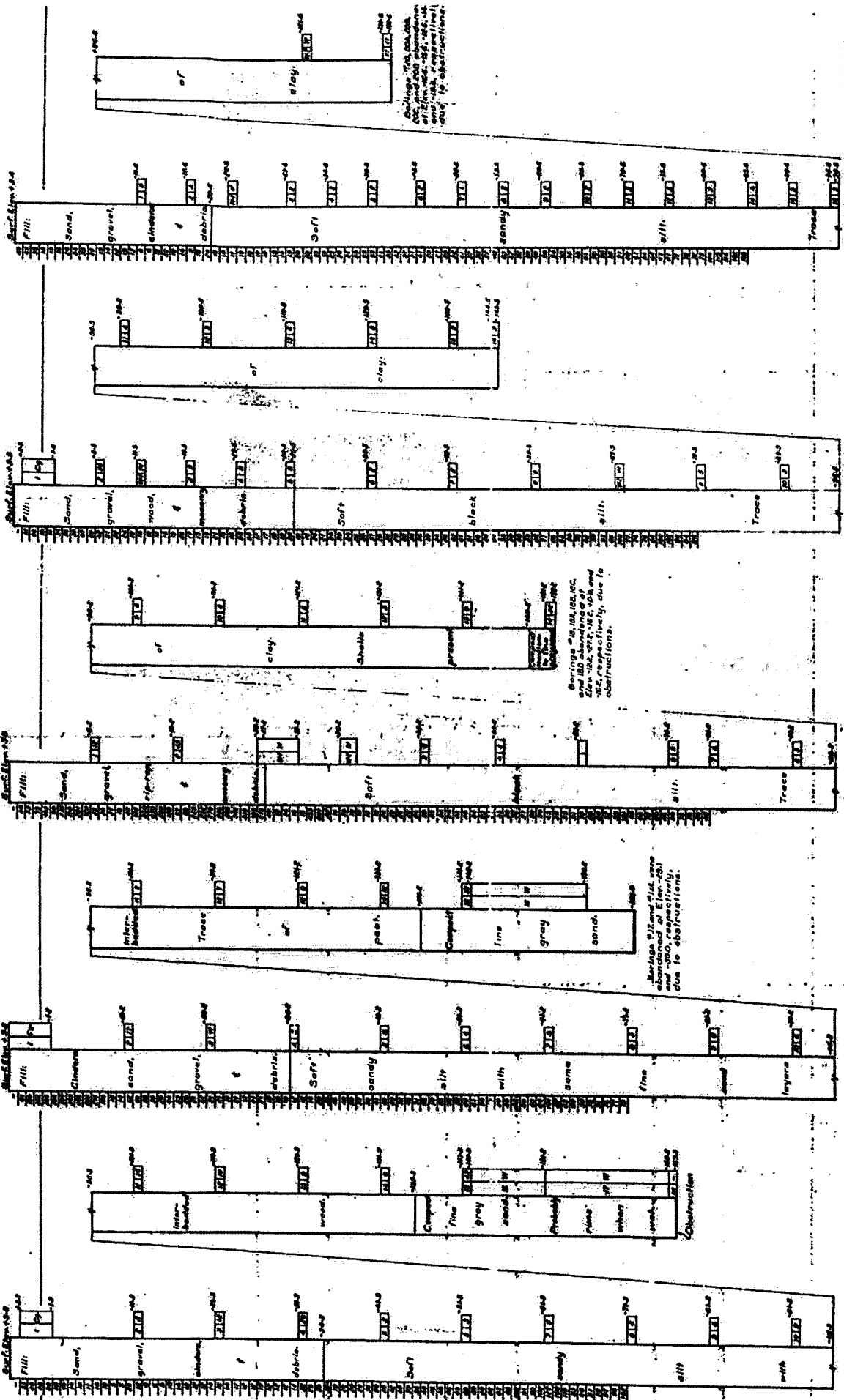
17B

18E

19

20E

FLASSTON



CITY OF NEW YORK
 DEPARTMENT OF PUBLIC WORKS
 SUBSURFACE EXPLORATION SEC
 RECORD OF BORINGS
 MADE AT A SITE FOR THE
 (PROPOSED)
GANSEVOORT DESTRUCTOR
 WEST STREET AT BLOOMFIELD 5
 BOROUGH OF MANHATTAN

SHEET _____ OF _____

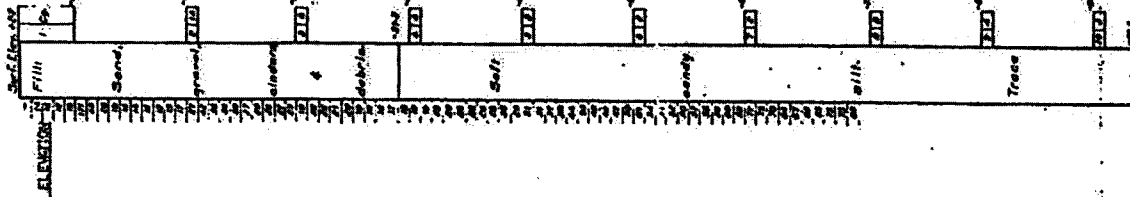
Scale: Vertical scale of feet above and below 0

Scale: Horizontal scale of feet above and below 0

Scale: 1 inch = 10 feet

Scale: 1 inch = 10 feet

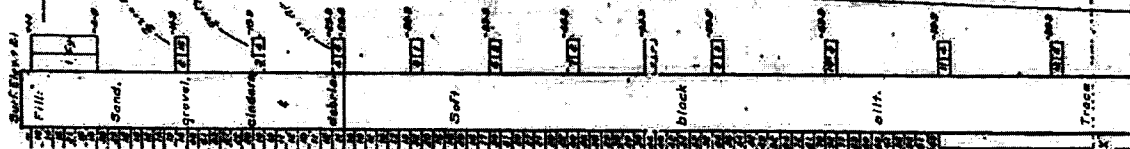
21



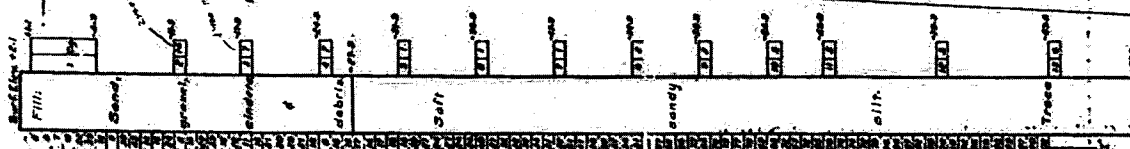
22



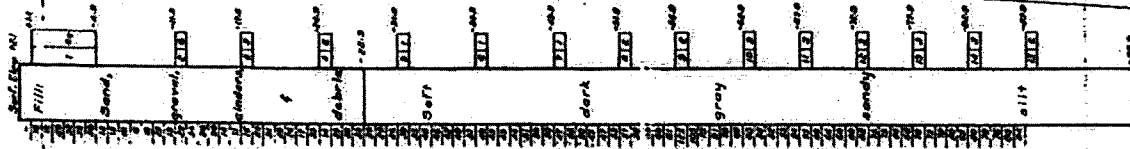
23



24



25



REPUBLIC CITY OF NEW YORK
 DEPARTMENT OF CONSTRUCTION
 SUBSURFACE EXPLORATION SECT
 RECORD OF BORINGS
 MADE AT A SITE FOR THE
 (PROPOSED)
 GANSEVOORT DESTRUCTOR F
 WEST STREET AT BLOOMFIELD ST
 Borough of Manhattan

ELEVATION

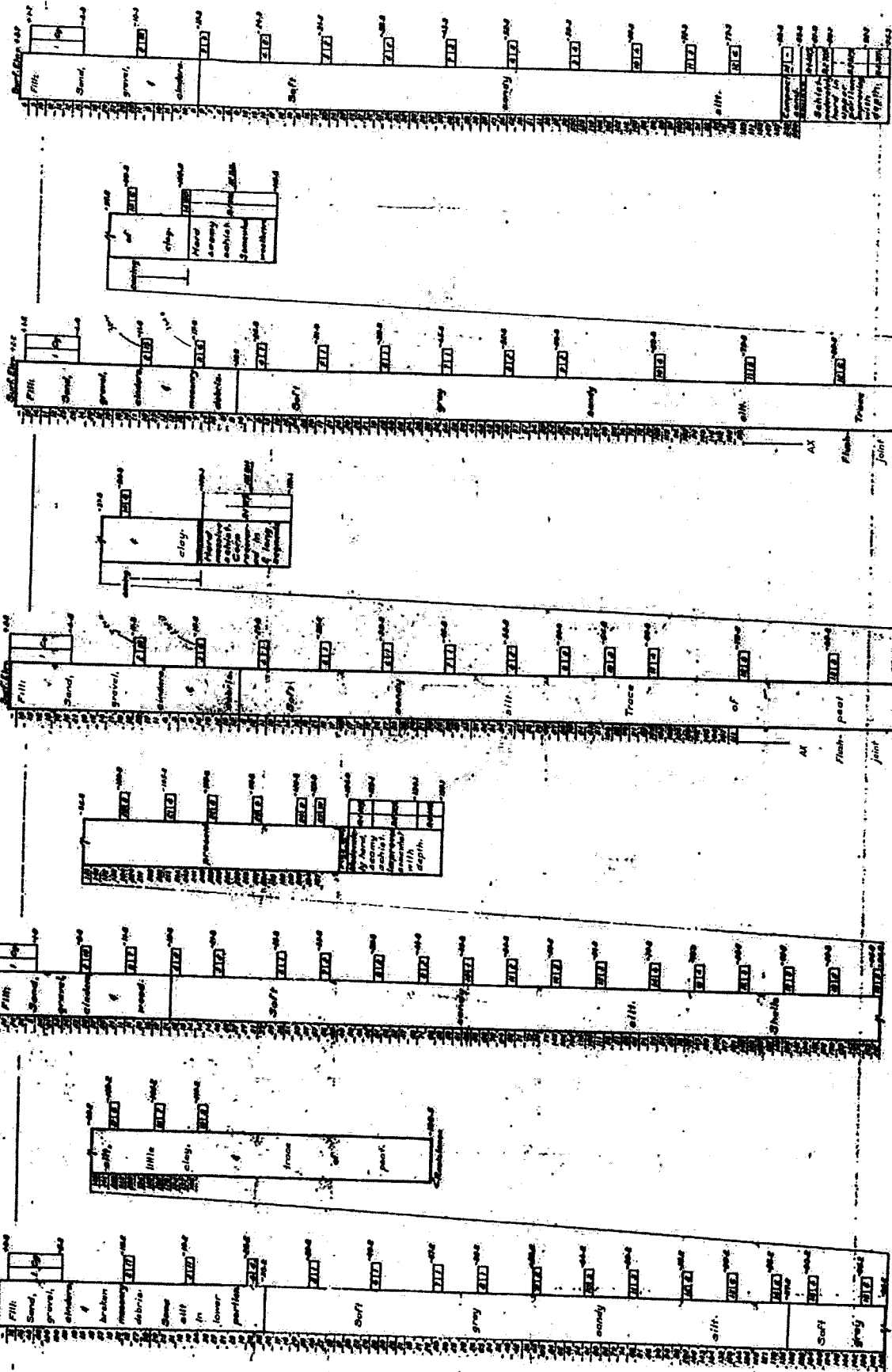
26

27

28

29

30



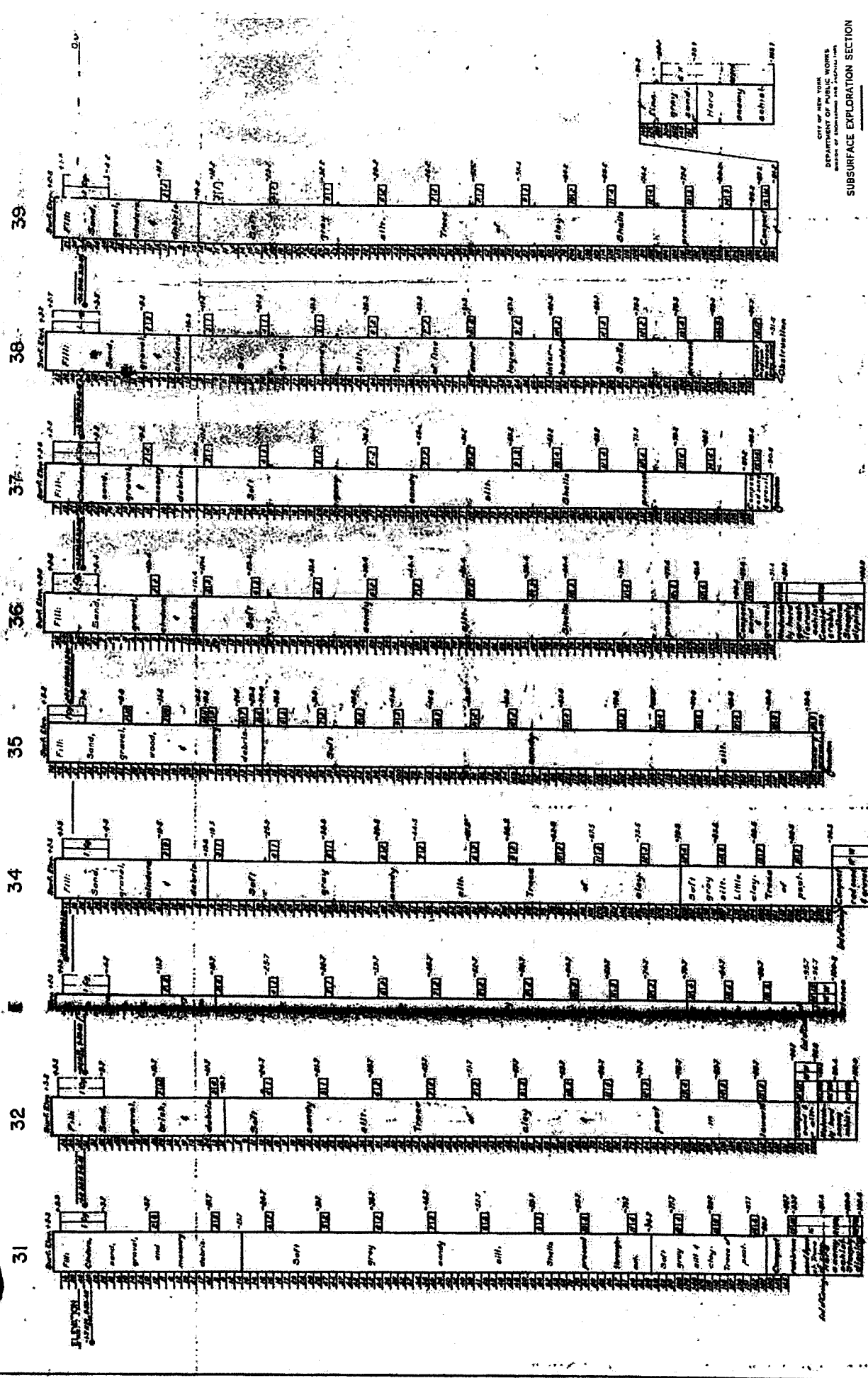
CITY OF NEW YORK
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF INVESTIGATION AND INSPECTION
 SUBSURFACE EXPLORATION SECTION
 RECORD OF BORINGS
 MADE AT A SITE FOR THE
 (PROPOSED)
 GANSEVOORT DESTROYER PL
 WEST STREET AT BLOOMFIELD STRE
 BOROUGHS OF MANHATTAN

NOTES: 1. BORING 28 - SANDSTONE CONTAINS SILICA
 2. BORING 29 - SANDSTONE CONTAINS SILICA

DATE: 11/10/11

SCALE: 1" = 10'

NO. 1000



John D. ...

...

...

...

IMPORTANT NOTE

The Boring Logs shown on this sheet are the result of inferences drawn by the engineer from the boring logs, test reports, and other information available to him at the time the logs were prepared. It is the responsibility of the engineer to determine the reliability of the information furnished to him by the contractor or other sources. The engineer's report on the boring logs should include a statement of the methods used to determine the reliability of the information and a statement of the inferences drawn therefrom. The engineer's report should also include a statement of the methods used to determine the reliability of the information and a statement of the inferences drawn therefrom.

EXPLANATION OF TERMS

Description Term	Payable Shave No.	Required Shave No.	Site Range
Clay	200	200	< 0.025 mm.
Silt	200	200	0.025 to 0.075 mm.
Fine Sand	40 (60)*	200	0.075 to 0.25 mm.
Medium Sand	40	200	0.25 to 0.425 mm.
Coarse Sand	40	200	0.425 to 0.85 mm.
Gravel (fine)	40	200	0.85 to 2.0 mm.
Gravel (medium)	40	200	2.0 to 4.75 mm.
Gravel (coarse)	40	200	4.75 to 19 mm.
Cobbles	40	200	19 to 76 mm.
Boulders	40	200	76 to 250 mm.
Bedrock	40	200	> 250 mm.

Symbol	Unified System	Quantitative Estimate	Component Proportion	Percentage Range
U	Uniformly graded sand	U	U	35-50
US	Uniformly graded sand with fines	US	US	20-35
USC	Uniformly graded sand with clay	USC	USC	10-20
USML	Uniformly graded sand with little clay	USML	USML	1-10
USMC	Uniformly graded sand with medium clay	USMC	USMC	1-10
USLC	Uniformly graded sand with little clay	USLC	USLC	1-10
USL	Uniformly graded sand with little clay	USL	USL	1-10
US	Uniformly graded sand	US	US	1-10

LEGEND

SPOON SAMPLES

① Sample taken from top of soil.

② Sample taken from middle of soil.

③ Sample taken from bottom of soil.

CORE DRILLING

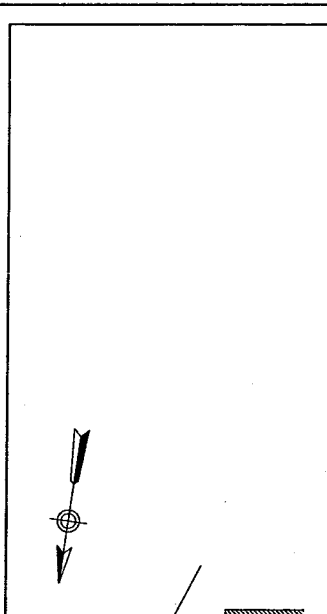
④ Sample taken from top of soil.

⑤ Sample taken from middle of soil.

⑥ Sample taken from bottom of soil.

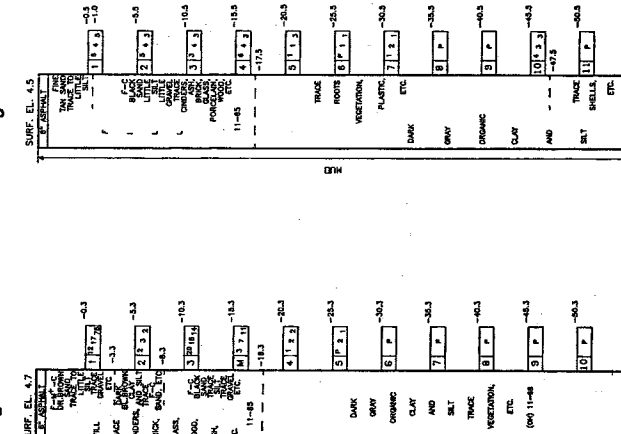
DATE	REVISIONS

DATUM NOTE: All elevations refer to the Benchmark of Manhattan Island, which is at J. 25.7. Elevation of top of rock is 25.7. Elevation of base of rock is 25.7. Elevation of top of soil is 25.7. Elevation of bottom of soil is 25.7.

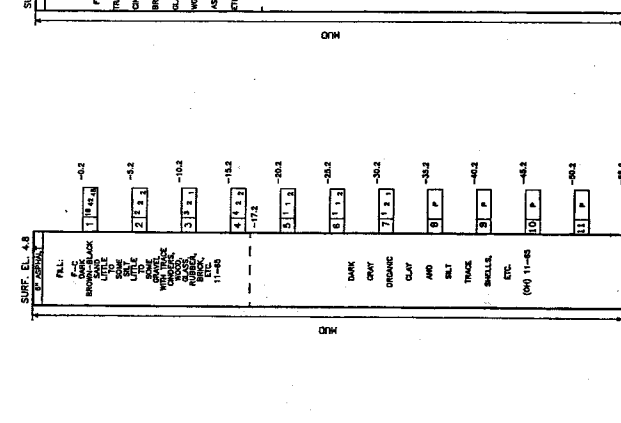


LOCATION PLAN
SCALE: 1"=30'

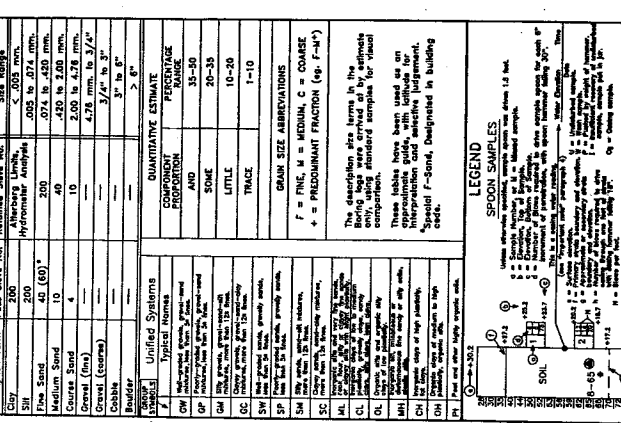
3 (cont'd)



2



1



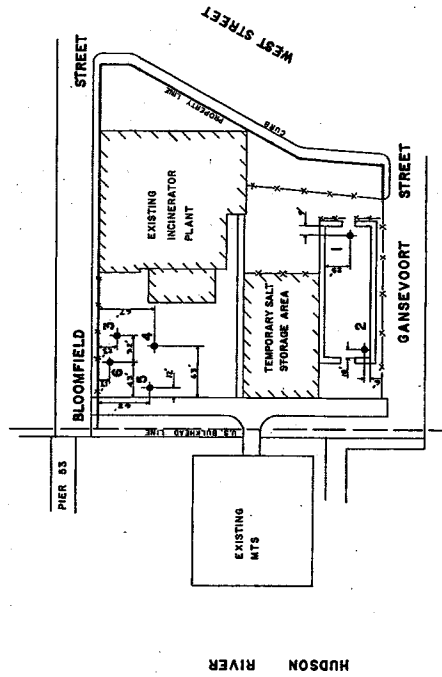
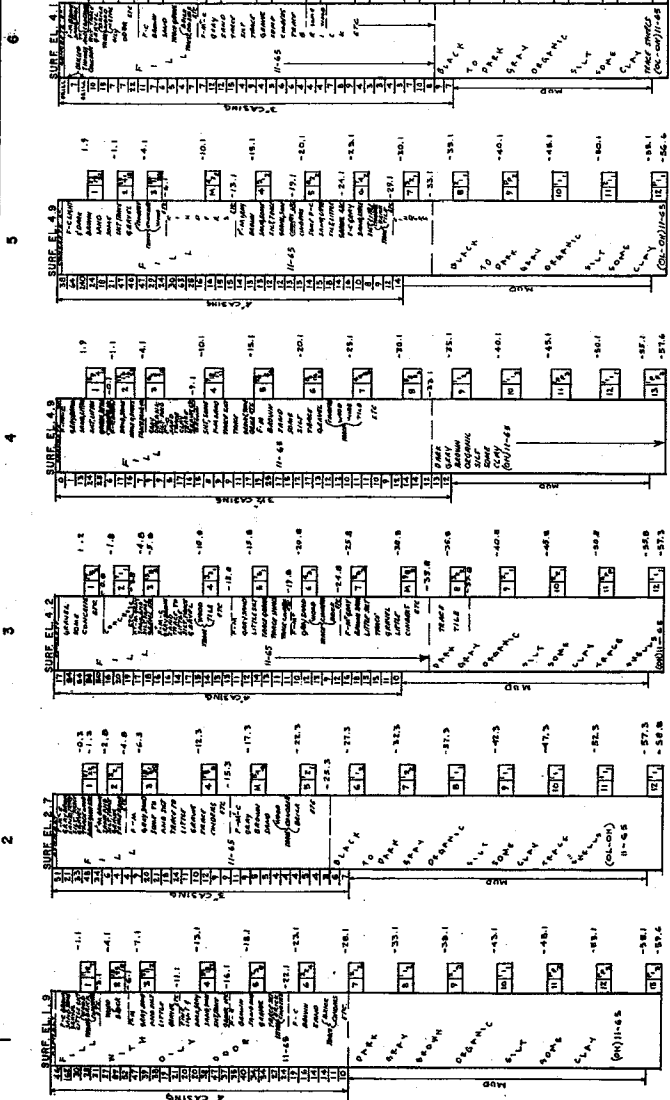
(FOR REFERENCE ONLY)

THE CITY OF NEW YORK
DEPARTMENT OF GENERAL SERVICES
DIVISION OF DESIGN AND CONSTRUCTION
CNG FUELING PROGRAM, GANSEVOORT INCINERATOR
BLOOMFIELD STREET AND WEST STREET
BOROUGH OF MANHATTAN
PREPARED BY:
SITE ENGINEERING
SUBSURFACE EXPLORATION SECTION
DATE: APRIL 11, 1974
SCALE: AS SHOWN
SHEET 1 OF 1
B-1

2302
MICHEL LEPTON, P.E.
ASSISTANT COMMISSIONER
HILARY BROWN, P.E. & L.S.
DIRECTOR, BUREAU OF BUILDING DESIGN
RICHARD J. OKOLSKY, P.E. & L.S.
ASST. DIRECTOR, SITE ENGINEERING

APPROVED: _____
CHECKED: _____
DATE: _____

2092



(FOR REFERENCE ONLY)

DEPARTMENT OF GENERAL SERVICES
DIVISION OF ENVIRONMENTAL MANAGEMENT

GANSEVOORT SALT SHED
BETWEEN GANSEVOORT STREET AND BLOOMFIELD STREET
BOROUGH OF MANHATTAN

PREPARED BY:
SITE ENGINEERING
SUBSURFACE EXPLORATION SECTION

RECORD OF BORINGS

DATE: J.A.S. 01.1992

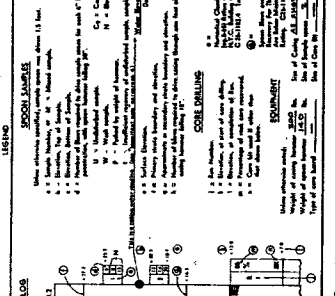
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HEET: 1 OF 1

IMPORTANT NOTE

The boring logs shown on this sheet are the result of information furnished by the Division of Public Works, Bureau of Environmental Management, dated 10/1/88, and the boring logs shown on this sheet are the result of the work performed during the field investigation conducted on 11/18/88, 11/19/88, and 12/1/88. The boring logs shown on this sheet are the result of the work performed during the field investigation conducted on 11/18/88, 11/19/88, and 12/1/88. The boring logs shown on this sheet are the result of the work performed during the field investigation conducted on 11/18/88, 11/19/88, and 12/1/88.

EXPLANATION OF TERMS	
Soil	Soil
Clay	Clay
Sand	Sand
Gravel	Gravel
Silt	Silt
Shale	Shale
Chalk	Chalk
Concrete	Concrete
Asphalt	Asphalt
Rock	Rock
...	...



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CHECKED BY: [Signature]
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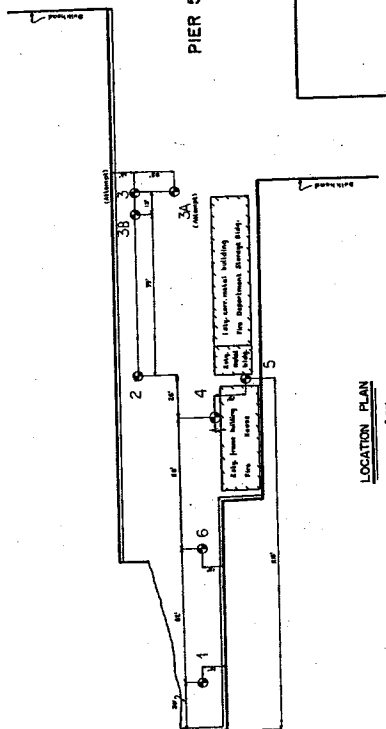
BENEDETTO J. RUCIO, E.I.T.
MICHAEL LUTJON, CONSULTANT

RICHARD J. DOLY, E.I.T.
MICHAEL LUTJON, CONSULTANT



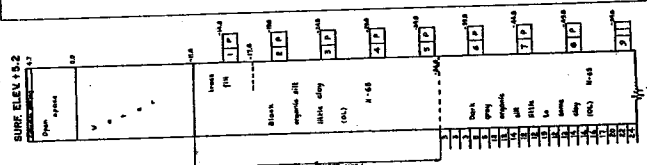
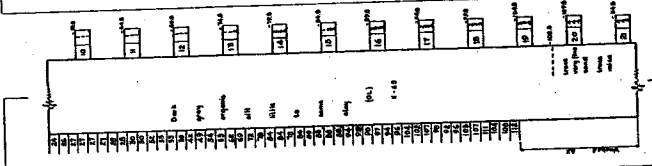
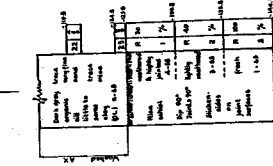
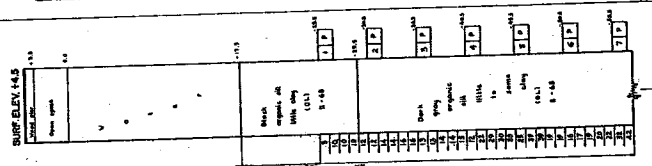
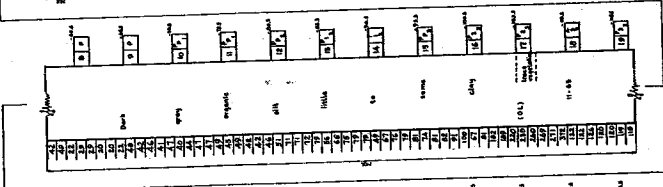
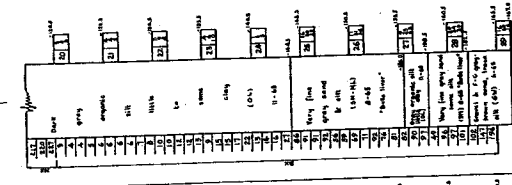
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North River



LOCATION PLAN
SCALE 1/320

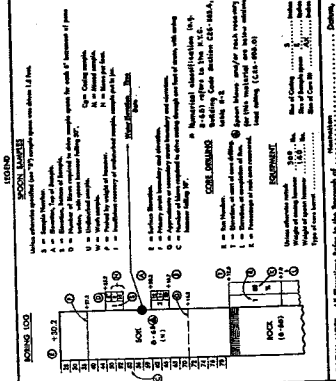
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EXPLANATION

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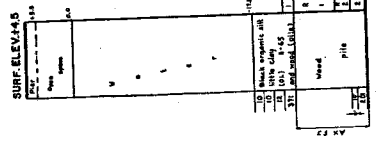
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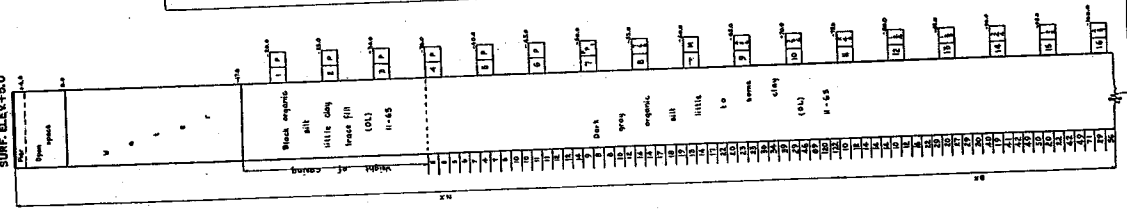
Subsurface Exploration Section
Robert C. ...
D. ...

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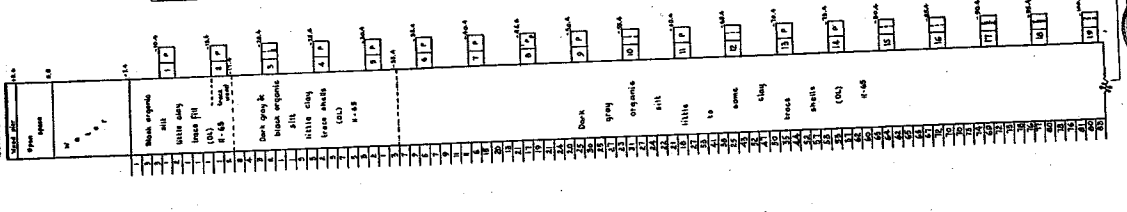
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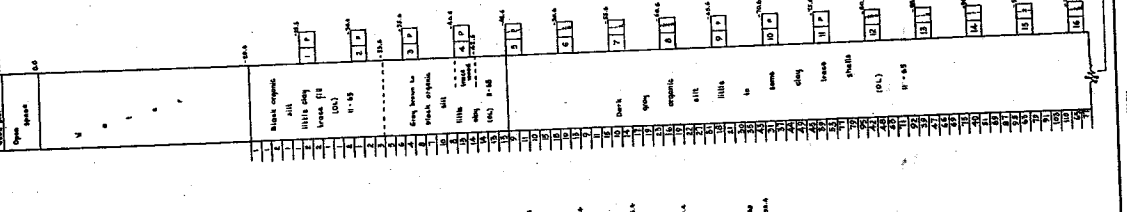
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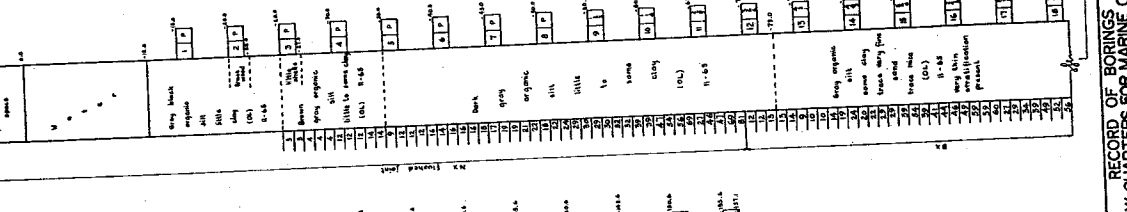
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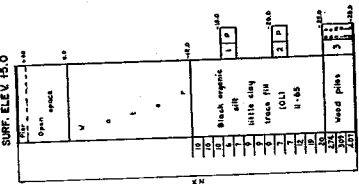
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3A



RECORD OF BORINGS
NEW QUARTERS FOR MACHINE CO. 2
AND POLICE LAUNCHING
BLOOMFIELD STREET, BOSTON
CITY OF BOSTON

CITY OF NEW YORK
DEPARTMENT OF PUBLIC WORKS
BUREAU OF SUBSURFACE EXPLORATION



Richard J. O'Connell
1/13/22
S. O. O'Connell
Chief Engineer

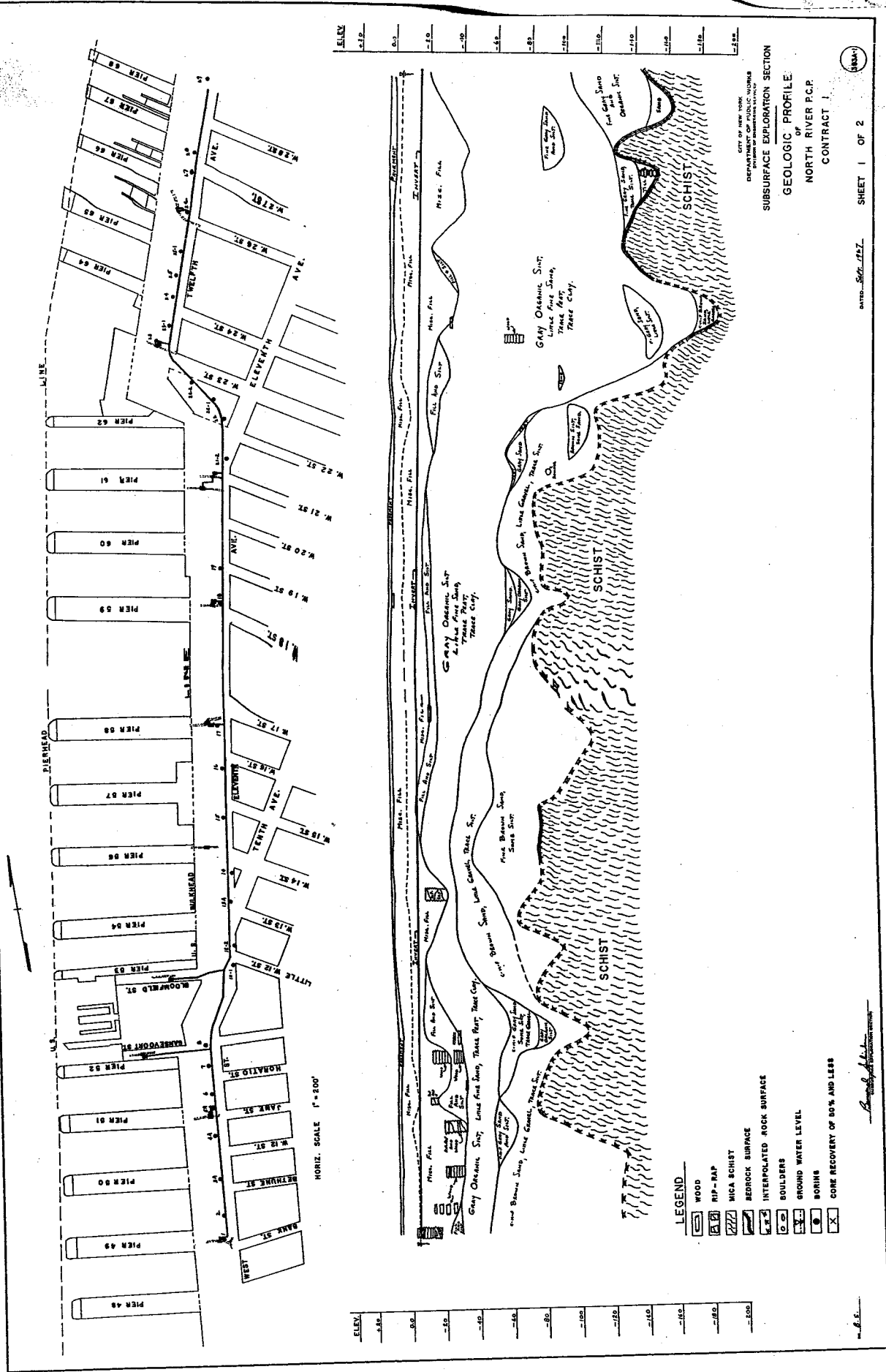
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ELEV. 120 110 100 90 80 70 60 50 40 30 20 10 0

CITY OF NEW YORK
 DEPARTMENT OF PUBLIC WORKS
 SUBSURFACE EXPLORATION SECTION
 GEOLOGIC PROFILE
 OF
 NORTH RIVER P.C.P.
 CONTRACT 1

DATE: Sep. 1917 SHEET 1 OF 2

- LEGEND
- WOOD
 - RIP-RAP
 - MICA SCHIST
 - BEDROCK SURFACE
 - INTERPOLATED ROCK SURFACE
 - BOULDERS
 - GROUND WATER LEVEL
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 - CONE RECOVERY OF 50% AND LESS

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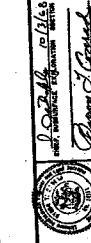
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SHEET 9 OF 26

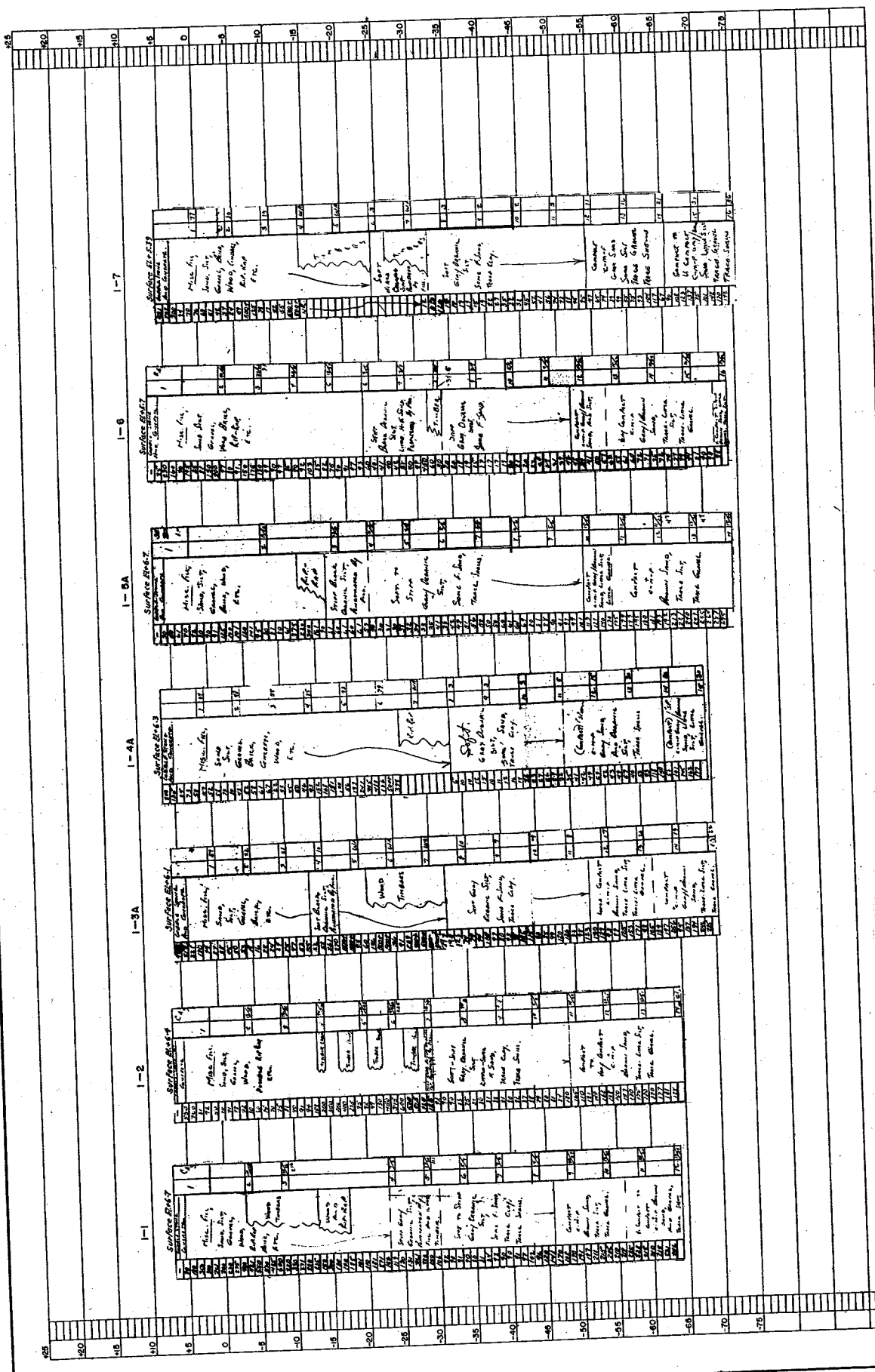


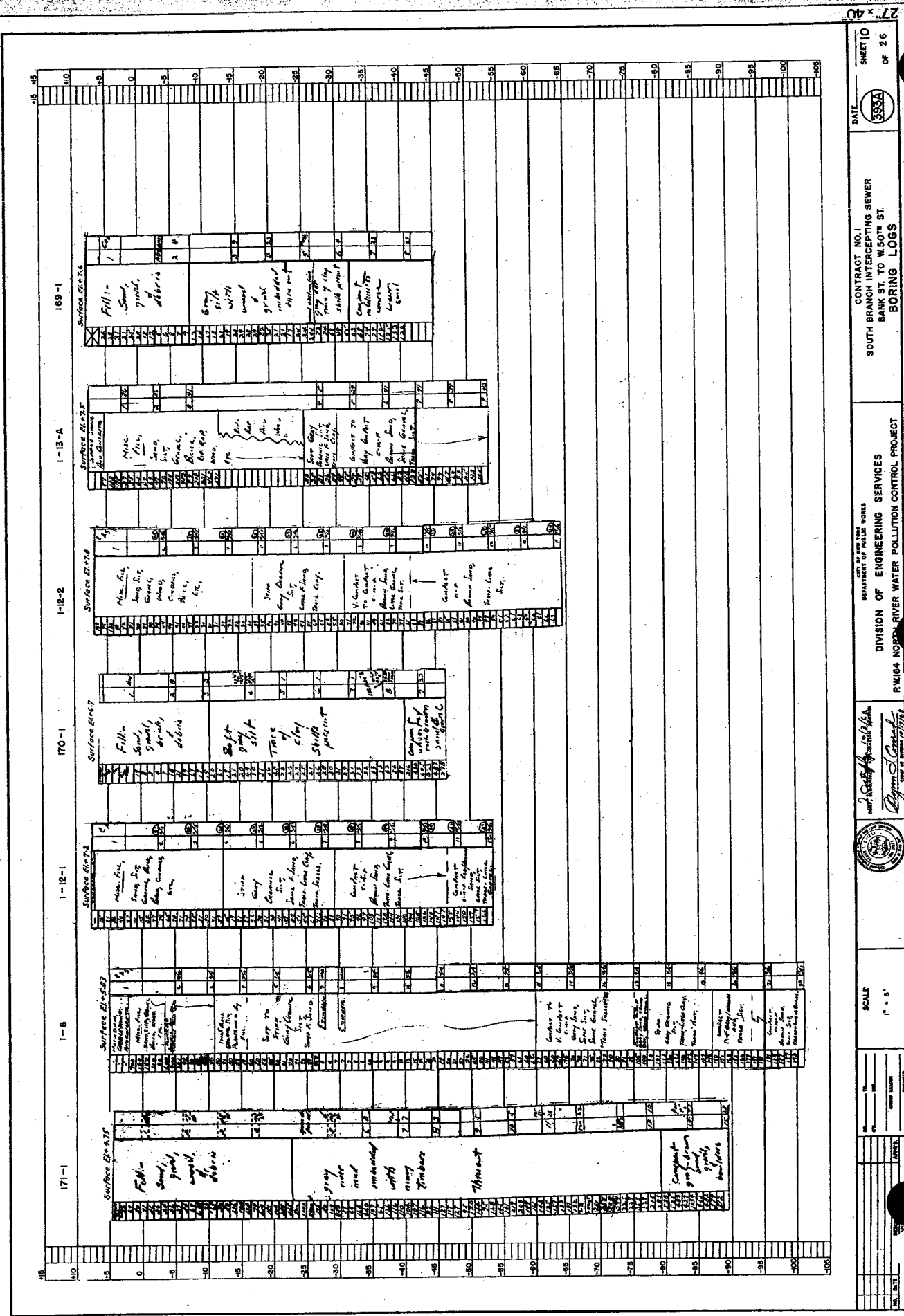
CONTRACT NO. 1 SOUTH BRANCH INTERCEPTING SEWER BANK ST. TO W. 50TH ST. BORING LOGS

CITY OF THE STATE OF MISSOURI DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING SERVICES P.W. 164 NORTH RIVER WATER POLLUTION CONTROL PROJECT



SCALE 1" = 3'





STORMWATER POLLUTION PREVENTION PLAN

for

THE GANSEVOORT MARINE TRANSFER STATION SITE DEMOLITION

Prepared For:

**New York City Department of Design and Construction
30-30 Thompson Avenue
Long Island City, NY 11101**

Prepared By:

**Langan Engineering, Environmental,
Surveying and Landscape Architecture, D.P.C.**

619 River Drive Center 1

Elmwood Park, New Jersey 07407

NJ Certificate of Authorization No. CA27996400



**Leonard D. Savino P.E.
NY Professional Engineer License No. 00013-1**

14 February 2014

Langan Project No. 100331901

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

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Figure 6	Cornell Rainfall Data (100-Year Storm)

LIST OF DRAWINGS (NOT INCLUDED- REFER TO CONTRACT DOCUMENTS)

Boundary & Topographic Survey (prepared by Tectonic Engineering Consultants)	
CD101	Site Demolition Plan
CD102	Utility Demolition Plan
CE101	Soil Erosion and Sediment Control Plan
CG101	Post-Demolition Improvements Plan

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Appendix B	Phasing Diagrams
Appendix C	Sample Site Log Book
Appendix D	Contractor Certification Statement
Appendix E	Owner Certification Statement
Appendix F	State Historic Preservation Office Letter
Appendix G	Notice of Termination (NOT) – Blank Form
Appendix H	Stormwater Runoff Calculations
Appendix I	Stormwater Maintenance Plan

1.0 INTRODUCTION

This report is a Stormwater Pollution Prevention Plan (SWPPP) developed for the demolition of the Gansevoort Marine Transfer Station site. This SWPPP has been prepared in accordance with the New York State Pollutant Discharge Elimination System (SPDES) program. New York State has been delegated by the Environmental Protection Agency (EPA) to administer the SPDES program in lieu of the EPA's National Pollutant Discharge Elimination System (NPDES).

Pursuant to the Clean Water Act, stormwater discharges from certain construction activities are unlawful unless they are authorized by a NPDES permit or by a state permit program (SPDES). Construction activities that involve soil disturbances in excess of one acre of land must obtain coverage under the Phase II New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity No. GP-0-10-001 prior to commencement of construction activity.

The SPDES general permit requires that this Construction Activity SWPPP be prepared prior to construction. The SWPPP must be amended whenever there is a change in the contractor(s), or a change in design, operation or maintenance of the site that has not otherwise been addressed in the plan or if the actions required by the SWPPP fail to prevent pollution.

In accordance with requirements of the General Permit, a completed NOI for Stormwater Discharges Associated with Construction Activities form will be forwarded to the NYSDEC. A copy of the NOI Form is provided in Appendix A.

2.0 SITE DESCRIPTION

2.1 Project Narrative

The Gansevoort Marine Transfer Station (MTS) site is located in the southwest corner of Manhattan, along West Street (a.k.a. New York State Route 9A); refer to Figure 1 (Site Location Map). The MTS property is approximately 4.7 acres and is identified on the tax maps for the City of New York as Block 651, Lot 1. The MTS site is bound by Bloomfield Street to the north, West Street (a.k.a. NYS Route 9A) to the east, Gansevoort Street to the south and the Hudson River to the west.

Existing Conditions

The Gansevoort MTS property is presently developed with several buildings including the City of New York Department of Sanitation Destructor Plant, the Marine Transfer Station (MTS) over the Hudson River, a salt storage barn and associated asphalt parking and driveway areas (refer to the Tectonic boundary and topographic survey drawings in the Drawings section of this report). The property is currently owned by the Hudson River Park Trust (HRPT) and operated by the City of New York Department of Sanitation (DSNY). The total existing building footprint is approximately 89,000 square feet (143,000 square feet of gross floor area). Access to the site is provided at the intersection of Gansevoort Street and West Street. In addition, there is a curved driveway entrance from West Street which connects to Bloomfield Street. Slopes are very mild throughout the majority of the property and approximate grades vary from elevation 7 at the center of the property to elevation 2.8 at the southwest corner of the property. In addition, there is a ramp that the DSNY garbage trucks use to gain access to the raised MTS facility on the west side of the property. Grades on this ramp vary from approximate elevation 5 to 23. Elevations are referenced to the Borough of Manhattan Vertical Datum.

A portion of the stormwater runoff from the property drains into a sewer which runs around the property. The remainder discharges via overland flow into the Hudson River. There are two NYCDEP sewers located in both Gansevoort and Bloomfield Streets, running in a westerly direction and ultimately discharging directly into the Hudson River. The northerly 3'-6" by 2'-4" sewer line in Bloomfield Street runs from West Street, turns abruptly to the north and discharges into the Hudson River. The southerly 4'-0" by 2'-8" sewer line in Gansevoort Street runs from West Street and discharges directly into the Hudson River as well. Both of these sewer lines convey on-site flow as well as flows from offsite properties east of the site. There is also a private 3'-6" by 2'-4" sewer line running in a north-south direction, which is currently abandoned.

Proposed Conditions

The demolition of the Gansevoort MTS site will include removing all structures, foundations, utilities that service the MTS site and other associated site and infrastructure features. As requested by HRPT, the entire site will then be excavated to five feet below existing grades and the excavation will be backfilled with sand and topped with crushed stone as a stabilization measure. The Gansevoort MTS demolition and re-stabilization project will generally consist of the following work:

- Demolition of approximately 89,000 square feet of existing Department of Sanitation buildings and structures (143,000 square feet of gross floor area),

- which includes the destructor plant, a salt shed and the marine transfer station structure constructed over the Hudson River;
- Demolition and/or abandonment of all existing utility and site infrastructure which supports the current site usage;
 - Removal of all existing on-site soils to a depth of five feet below existing grade;
 - Backfill of site with 4'-3" of clean sand topped with 9" of crushed stone;
 - Maintenance of existing bike and jogging lanes along West Street;
 - Maintenance of existing FDNY building; and
 - Construction of a temporary, 30'-wide asphalt roadway with flush concrete curbs to maintain access to the existing FDNY building, Bloomfield Street and Gansevoort Street.

Refer to Appendix B for Phasing Diagrams of the site demolition.

Access to the property will be maintained as mentioned earlier. Slopes will continue to be mild throughout the property. The post-demolition topography has been designed to mimic pre-demolition drainage patterns, with a high point at the center of the site and low points at the existing storm drains, which are to remain (see Drawing CG101 - Post-Demolition Improvements Plan). Replacing the existing impervious surface with crushed stone and sand will provide for groundwater infiltration into the soil. This will reduce the stormwater runoff the currently flows into the sewers and ultimately the Hudson River.

The existing stormwater discharge point from the property will be maintained in proposed conditions: the two branches of sewer lines north and south of the site. Proposed discharge rates at connection points to the sewer system will be reduced from existing rates.

2.2 Historic Structures, Archeological and Cultural Resources

The State Historic Preservation Officer (SHPO) has provided a letter indicating that the existing western seawall does not qualify for SHPO filing and approvals. In addition, there are no other items of cultural or historical significance on the site. A copy of this correspondence can be found in Appendix G.

2.3 Soil Description

Based on reviewing the Viele Sanitary and Topographical Map (refer to Figure 2), the soils within the site would be identified as historic fill over soft Hudson River mud, underlain by sand over rock. The map in Figure 2 shows the former limit of the Hudson

River to be on the east side of the project site. As such, the Gansevoort Peninsula was likely created using fill material.

2.4 Floodplain

According to the Federal Emergency Management Agency's (FEMA) Preliminary Work Map (refer to Figure 3), the site is located in flood zone AE with a small portion of the site located in the VE flood zone. The VE flood zone is a coastal flood zone with a velocity hazard (wave action) with the 100-year base flood elevation at 16. The AE flood zone is a special flood hazard area with the 100-year base flood elevation varying between elevations 11 and 13 across the site. All elevations indicated above are referenced to the North American Vertical Datum of 1988 (NAVD 88).

2.5 Contact Information

The Hudson River Park Trust (HRPT) is responsible for ensuring all contractors and subcontractors associated with the site work construction activities identified within this SWPPP agree to implement applicable provisions of the SWPPP and sign a copy of the Contractor's certification statement, included in Appendix F, before construction commences. The HRPT is also responsible for the construction and post-construction maintenance schedules. Their contact information is contained in the Notice of Intent (NOI) form located in Appendix A and has been included below:

Dennis Diggins
Deputy Commissioner of Solid Waste Management
New York City Department of Sanitation
125 Worth Street, Room 726
New York, NY 10013
(646) 885-4684

3.0 EROSION AND SEDIMENT CONTROL

3.1 Construction Sequence

The contractor will be responsible for implementing the following soil erosion and sediment control measures. A preliminary detailed construction sequence has been included on the Soil Erosion and Sediment Control Plan, Drawing CE101.

3.2 Erosion Control Plans and Details

Soil erosion and sediment control measures for the site have been designed based on the New York Standards and Specifications for Erosion and Sediment Control. The Drawings section of this report contains a soil erosion and sediment control plan for all areas of construction as well as details of each of the proposed measures. The plan indicates the locations of all temporary and permanent soil erosion measures. After installation of each of the measures, a thorough inspection and maintenance program will be followed to promote on-going proper performance. A list and description of proposed measures is provided below:

Silt Fence

Silt fence is proposed down-gradient of the development areas to reduce runoff velocity and prevent sediment from leaving the site. A silt fence will also encircle temporary soil stockpiles.

Turbidity Curtain

A turbidity curtain is a floating, impermeable barrier that is installed in water around the demolition site. This barrier traps any sediment or debris that may fall into the water so that it may be collected and removed during the course of demolition. A turbidity curtain will surround the site's entire frontage along the Hudson River. A "Type III" turbidity curtain will be required because of the rough waters in the Hudson River.

Stabilization Measures

Any disturbed area that will be left exposed more than 15 days, and not subject to construction traffic, shall immediately receive a temporary seeding in accordance with the state of New York State Standards and Specifications for Erosion and Sediment Control. Mulch may be used if the season prevents the establishment of a temporary cover. Permanent stabilization shall be performed as soon as possible after completion of grading.

An alternative measure to temporarily stabilize these exposed areas will be the placement of an approximate 9-inch-thick layer of crushed clean stone.

Construction Vehicle Access

A stabilized pad of rock aggregate underlain with filter fabric will be located at locations leading from the work areas of the project to reduce or eliminate the tracking of sediment onto paved and public streets. The pad thickness will be constantly maintained to the specified dimensions by adding rock, as necessary. A stockpile of rock will be maintained on site for this purpose. At the end of each

construction day, all sediment deposited on paved and/or public streets, if any, will be removed and returned to the site. Washing sediment into storm sewers is not permitted.

Temporary Soil Stockpile

The maximum slope for a temporary soil stockpile shall be 2 horizontal to 1 vertical. The stockpile shall be encircled with a silt fence to prevent the spread of sediment from the stockpile to the rest of the site. Any temporary stockpile inactive for more than 15 days will be stabilized or covered.

Inlet Protection

Inlet protection is required at all existing and proposed catch basins to prevent sediment-laden water from entering the storm drainage system. The type of inlet protection will vary based on the type of inlet and field conditions.

Dust Control

Generation of dust shall be minimized by limiting the extent of exposed soils and stabilizing these areas as soon as possible. Additional and/or temporary methods to minimize dust may include wetting, mulching, spray adhesives, stone covering, and wind barriers in accordance with New York State Standards and Specifications for Erosion and Sediment Control.

Compost Silt Sock

Compost silt sock is a three-dimensional mesh tubular sediment control and storm water runoff filtration device filled with a ground wood compost blend and is typically used for perimeter control of sediment and other soluble pollutants (such as phosphorus and petroleum hydrocarbons), on and around construction activities. This is an alternative to silt fence for perimeter protection, stockpile protection, etc.

3.3 General Construction Pollution Prevention Controls

The following material management practices shall be implemented during construction to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff. The job site superintendent will be responsible for ensuring that these procedures are followed.

3.3.1 Good Housekeeping and Materials Storage

The following good housekeeping practices will be followed on site during the construction project:

1. An effort will be made to store only enough products required to do the job. Minimize on-site storage of hazardous materials.
2. Maintain Material Safety Data Sheets (MSDS) for all hazardous materials stored on-site.
3. All materials stored on-site will be stored in a neat, orderly manner and, if possible, under a roof or in a containment area to protect them from rainfall and wind dispersal. At a minimum, all containers will be stored with their lids on when not in use. Drip pans shall be provided under all dispensers.
4. Products will be kept in their original containers with the original manufacturer's label in legible condition.
5. Substances will not be mixed with one another unless recommended by the manufacturer.
6. Whenever possible, all of a product will be used up before disposing of the container. Follow manufacturer's recommendations for proper use and disposal.
7. The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.
8. Arrange for employees trained in emergency spill cleanup procedures to be present when dangerous materials or liquid chemicals are unloaded.
9. Locate material storage and construction staging areas as far away from drainage courses as possible.

3.3.2 Waste Management

1. All excavated soil and fill material shall be considered to be, at minimum, non-hazardous contaminated soils and disposed of off-site at a permitted landfill or disposal facility. Refer to Specifications 026100 (Excavation and Removal of Contaminated Soil) and 027100 (Water Treatment System) in the Contract Documents prepared by the Liro Group.
2. Waste collection areas shall be located in areas that do not receive a substantial amount of runoff from upland areas and do not drain directly to a water body or water course.
3. If required, additional BMPs must be implemented, such as a sandbag perimeter to contain runoff.
4. Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
5. Schedule waste collection to prevent containers from overflowing.
6. No construction wastes are to be buried on the site.

3.3.3 Spill Prevention and Response Procedure

1. The Contractor will be responsible to train all personnel in the proper handling and cleanup of material spills.
2. In the event of a spill, immediately notify the Owner's representative.
3. To prevent leaks, empty and clean hazardous waste containers before disposing. Do not remove original product labels from containers. Follow the manufacturer's recommended method of disposal and cleanup.
4. Store new and used hazardous materials, such as petroleum products, fertilizers, detergents, construction chemicals, solvents etc., in covered areas with berms or dikes in place to contain any spills, if necessary.
5. Immediately contain and clean up any spills. Maintain spill and containment equipment on the site, such as absorbent materials, neutralizing agents, booms, dustpans, gloves, goggles, mops.
6. Maintain equipment in fuel storage areas and in construction vehicles to contain and clean up any spills that occur.

4.0 **POST-CONSTRUCTION STORMWATER MANAGEMENT**

4.1 **Post-Construction Stormwater Management Practices**

The Gansevoort MTS project involves demolishing and establishing a stabilized cover over the entire site. Pursuant to the NYSDEC SPDES General Permit for Stormwater Discharges, Appendix B, Table 1, the Gansevoort MTS project will not require post-construction stormwater management practices. As such, only soil erosion and sediment controls are required; water quantity and quality controls will not be required for this project.

4.2 **Stormwater Management Design Criteria**

4.2.1 Water Quantity

As previously mentioned, storm water management design for the project does not need to address water quantity controls if existing impervious area and runoff rates are maintained/decreased. As such, stormwater quantity controls are not required for this project since the stormwater runoff quantity will be reduced due to the reduction of impervious cover (by replacing the buildings and asphalt with sand and gravel).

To compare existing and proposed hydrologic conditions, hydrologic calculations were prepared using methods contained in the USDA Soil Conservation Service

Publication TR-55 "Urban Hydrology for Small Watersheds." The design storm used for this study is the 24-hour SCS Type III cumulative rainfall distribution. Twenty-four hour rainfall depths for the 1-year (2.9 inches), 10-year (4.7 inches) and 100-year (8.8 inches) storms were analyzed (refer to Appendix I).

4.2.2 Water Quality

As mentioned in Section 4.1 of this report, per the NYSDEC regulations, post-construction stormwater quality controls are not required for this project because the entire on-site impervious surface is being converted to a stabilized surface consisting of crushed stone and sand, which will also provide a means of groundwater infiltration.

4.2.3 Runoff Reduction

Although encouraged, meeting the Runoff Reduction Volume (RRv) sizing criteria is not required for this project. The impervious area will be greatly reduced in the proposed condition which will reduce the volume of runoff from the site. Any infiltration that may occur has not been considered in any of the stormwater analyses and would just be an added benefit to the design.

4.3 **Water Quantity**

Pre-development stormwater runoff rates were analyzed and compared to post-development conditions for the 1-year (Channel Protection), 10-year (Overbank Flood) and 100-year (Extreme Storm) storm events. Though not required, the demolition and re-stabilization of the site will result in reduced stormwater runoff rates. The following tables summarize the existing and proposed site discharges. Supporting calculations can be found in Appendix I. Refer to Figures 1 and 2 in Appendix I for existing and proposed watershed maps.

**Table 1 – 1-year Storm Event
 Summary of Existing and Proposed Flow Rates**

Watershed	Existing Flow (cfs)	Proposed Flow (cfs)	Difference (cfs)
Entire Site	13.76	10.79	-2.97

**Table 2 – 10-year Storm Event
 Summary of Existing and Proposed Flow Rates**

Watershed	Existing Flow (cfs)	Proposed Flow (cfs)	Difference (cfs)
Entire Site	22.53	19.95	-2.58

**Table 3 – 100-year Storm Event
Summary of Existing and Proposed Flow Rates**

Watershed	Existing Flow (cfs)	Proposed Flow (cfs)	Difference (cfs)
Entire Site	42.38	40.54	-1.84

Comparison of the existing and proposed site discharges results in a decrease of approximately 22%, 11% and 4% of the 1-, 10- and 100-year storm events, respectively.

5.0 INSPECTIONS AND REPORTING

5.1 Qualified Inspector

Under the direction of the Construction Manager, a "Qualified Inspector" shall conduct an assessment of the site prior to commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of demolition. A "Qualified Inspector," as defined in the New York SPDES General Permit requirements, is a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), licensed Landscape Architect, or other Department endorsed individual(s).

5.2 Inspection Frequency/Report

The owner or operator shall have a qualified inspector conduct a site inspection at least once per 7 days and within 24 hours following a rainfall event of 0.5 inches or greater. The qualified inspector shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

1. Date and time of inspection, site location, project name and SPDES Permit number;
2. Name and title of person(s) performing inspection;
3. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
4. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

5. Identification of all erosion and sediment control practices that need repair or maintenance;
6. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
7. Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume (for example, 10%, 20%, and 50%).
8. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection; and
9. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-demolition re-stabilization practice(s).

Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor (or subcontractor) of any corrective actions that need to be taken. The contractor (or subcontractor) shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame, in no case later than seven days following the inspection.

The Construction Manager shall maintain a record of all inspection reports in a site log book (refer Appendix D for a sample site log book). The site log book shall be maintained on-site and be made available to the permitting authority upon request. All inspection reports shall be signed by the qualified inspector. The Construction Manager shall post a summary of the site inspection activities on a monthly basis in a publicly-accessible location at the site. The Construction Manager shall prepare a written summary confirming its compliance with the SWPPP at a minimum frequency of every month during which the SPDES permit exists.

Prior to filing of the NOT or the end of permit term, the Construction Manager shall have the qualified inspector perform a final site inspection. The qualified inspector shall certify that all disturbed areas have achieved final stabilization and all temporary, structural erosion and sediment control measures have been removed in conformance with the SWPPP by signing the "Final Stabilization" certification statements on the NOT (refer to Appendix H).

5.3 Additional Record Keeping

The contractor shall also keep the following records related to construction activities at the site:

1. Dates when major grading/backfilling activities occur and the areas which were graded;
2. Dates and details concerning the installation of structural controls;
3. Dates when demolition activities cease in an area;
4. Dates when an area is stabilized, either temporarily or permanently;
5. Dates of rainfall and the amount of rainfall;
6. Dates and descriptions of the character and amount of any spills of hazardous materials; and
7. Records of reports filed with regulatory agencies if reportable quantities of hazardous materials spilled.

6.0 INSTALLATION AND MAINTENANCE

The contractor shall be responsible for the installation and maintenance of all temporary and permanent erosion control measures. The owner/operator shall be responsible for the maintenance of all permanent erosion control measures.

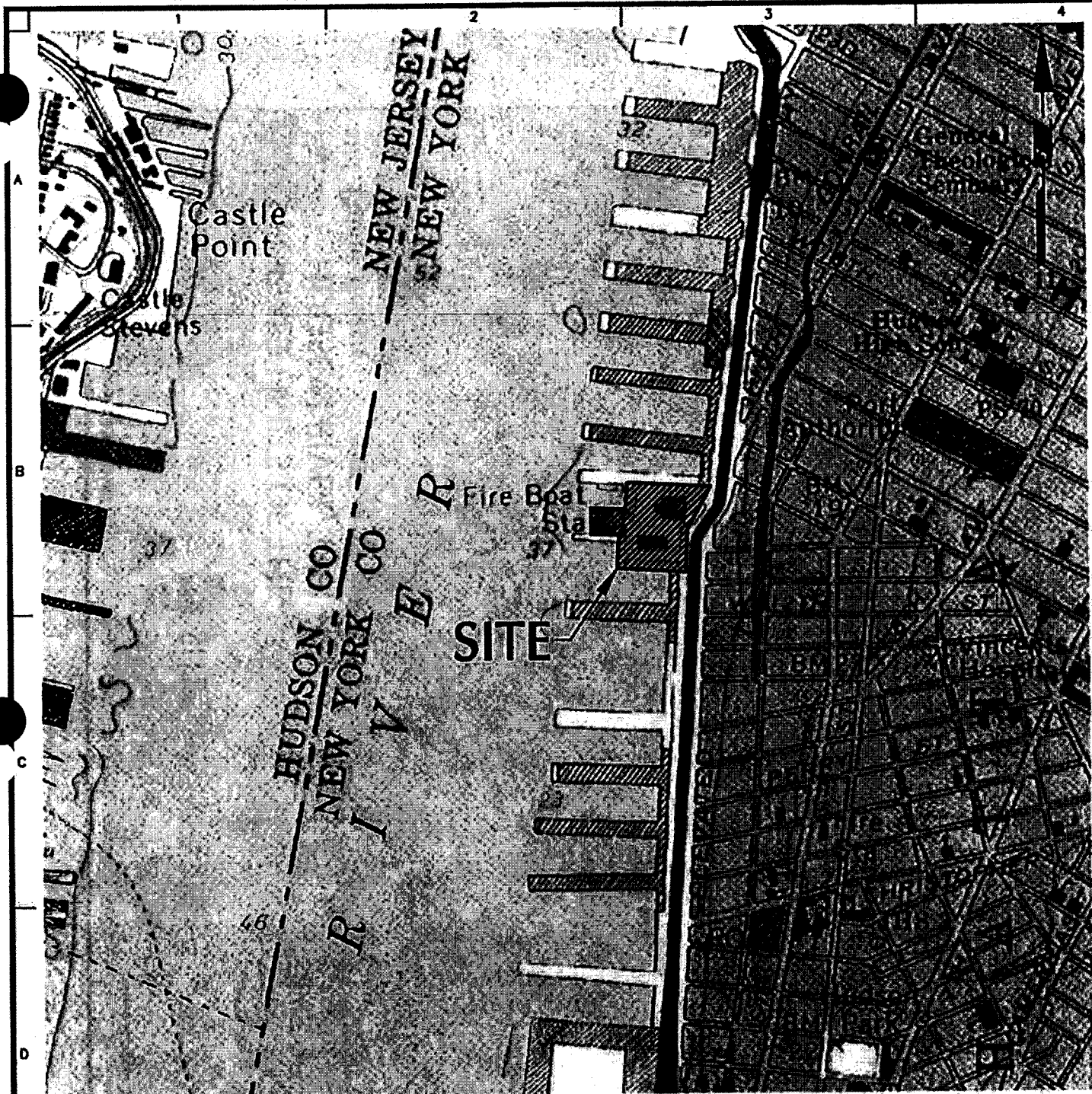
All temporary erosion control measures installed on the project site shall be observed and maintained to ensure that they are operating as intended and as described earlier in this plan:

1. Temporary measures will be inspected in accordance with the site inspection requirements and any necessary repairs, replacements, or upgrades will be made by the Contractor immediately.
2. Accumulated sediments will be removed as required to keep the measures functional. In the case of silt fencing, silt sock and haybales (if applicable), remove deposits where accumulations reach half the height of the fence or bale or as directed by manufacturer.
3. All erosion of the silt fence/silt sock/haybales will be repaired immediately.
4. Disturbed areas, stockpile areas, areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system or downstream watershed.
5. Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.

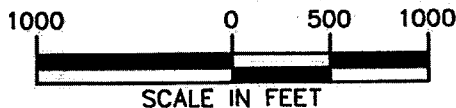
6. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
7. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.
8. The existing storm drainage system shall be inspected and cleaned of all sediment prior to completion of project. Refer to Appendix J for further details on permanent stormwater maintenance.

In addition, the material storage areas shall be inspected to ensure materials are being properly stored (see Section 3.3 of this SWPPP), have proper containment measures in place and are not leaking.

\\langan.com\data\ep\data9\100331901\office data\reports\swppp\100331901 - swppp.docx



MAP REFERENCE: USGS MAPS FOR BROOKLYN, CENTRAL PARK, JERSEY CITY AND WEEHAWKEN QUADRANGLES.



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Project

**GANSEVOORT MARINE
TRANSFER STATION
SITE DEMOLITION**
2 BLOOMFIELD STREET
BLOCK 651, LOT 1
BOROUGH OF MANHATTAN

NEW YORK COUNTY NEW YORK

Drawing Title

**SITE LOCATION
MAP**

Project No.

100331901

Date

06 JAN 2014

Scale

1" = 1,000'

Drawn By

EMJ

Submission Date

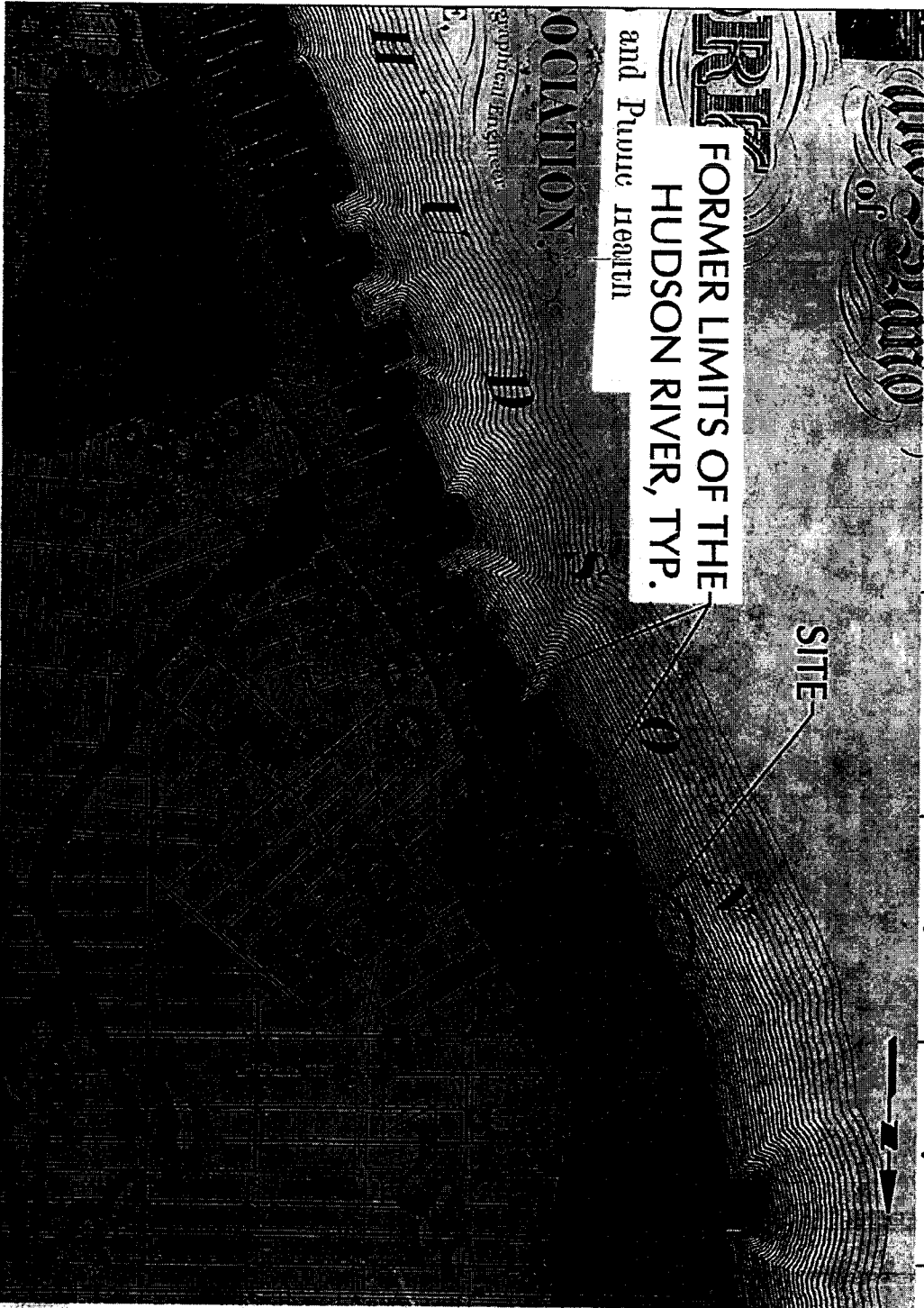
06 JAN 2014

Drawing No.

**FIGURE
1**

PROJECT No. 100331901 SUBMISSION DATE: 06 JANUARY 2014 LANEAN

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MAP REFERENCE: VIELE SANITARY AND TOPOGRAPHICAL MAP FOR THE CITY AND ISLAND OF NEW YORK, DATED 1865

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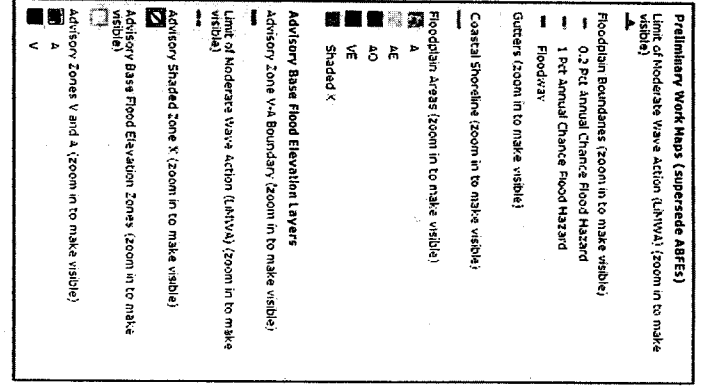
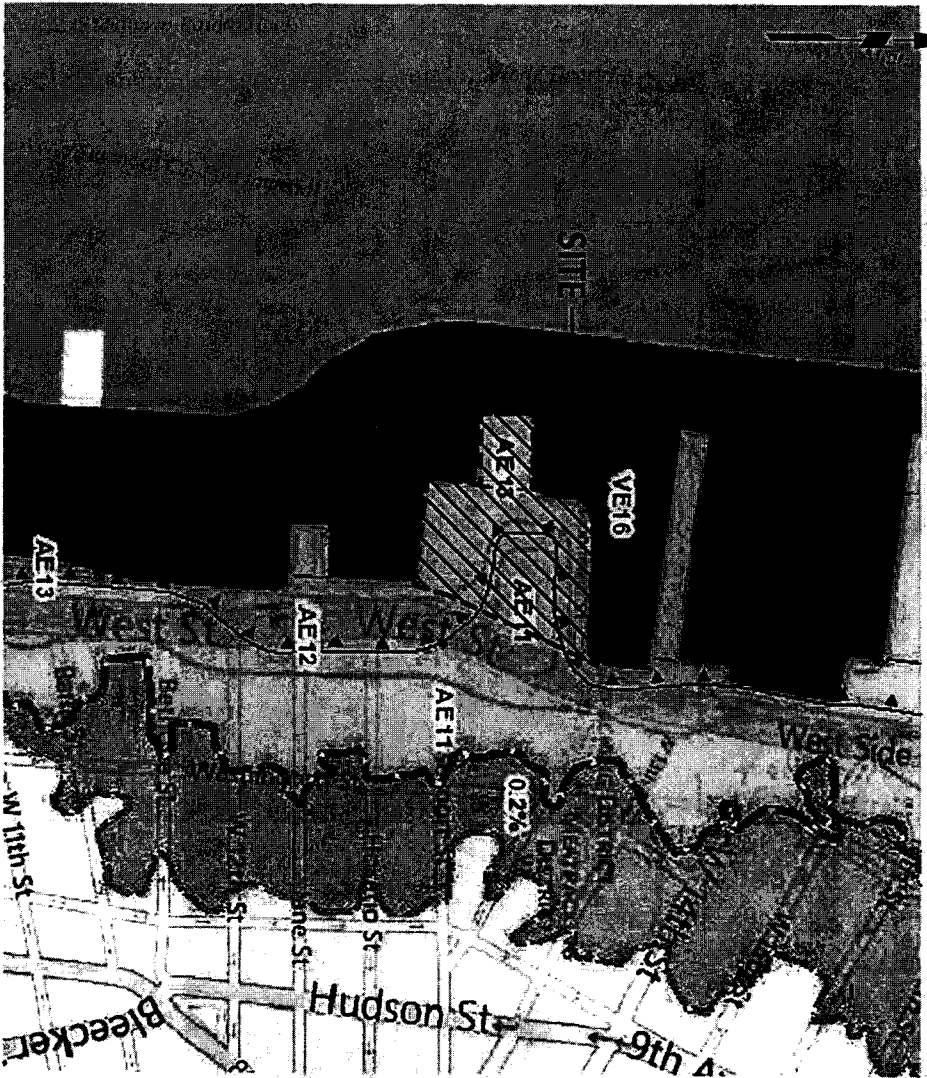
31 Penn Plaza
200 West 31st Street 6th Floor
New York, NY 10007-3172
New York, NY 10001
Tel: (212) 279-2000 F: (212) 279-2444

NEW YORK	REGISTERED	REGISTERED	REGISTERED
NEW JERSEY	REGISTERED	REGISTERED	REGISTERED
PENNSYLVANIA	REGISTERED	REGISTERED	REGISTERED
VIRGINIA	REGISTERED	REGISTERED	REGISTERED
FLORIDA	REGISTERED	REGISTERED	REGISTERED
ILLINOIS	REGISTERED	REGISTERED	REGISTERED
INDIANA	REGISTERED	REGISTERED	REGISTERED
MICHIGAN	REGISTERED	REGISTERED	REGISTERED
MINNESOTA	REGISTERED	REGISTERED	REGISTERED
NEBRASKA	REGISTERED	REGISTERED	REGISTERED
OHIO	REGISTERED	REGISTERED	REGISTERED
PENNSYLVANIA	REGISTERED	REGISTERED	REGISTERED
TENNESSEE	REGISTERED	REGISTERED	REGISTERED
TEXAS	REGISTERED	REGISTERED	REGISTERED
UTAH	REGISTERED	REGISTERED	REGISTERED
VIRGINIA	REGISTERED	REGISTERED	REGISTERED
WASHINGTON	REGISTERED	REGISTERED	REGISTERED
WEST VIRGINIA	REGISTERED	REGISTERED	REGISTERED
WISCONSIN	REGISTERED	REGISTERED	REGISTERED
MISSOURI	REGISTERED	REGISTERED	REGISTERED
MISSOURI	REGISTERED	REGISTERED	REGISTERED

Project:
GANSEVOORT MARINE
TRANSFER STATION
SITE DEMOLITION
2 BLOCKS 651, LOT 1
BLOCK 651, LOT 1
BOROUGH OF MANHATTAN
NEW YORK

Drawing Title:
VIELE
SANITARY AND
TOPOGRAPHICAL
MAP

Project No. 100531901	Drawing No.
Date 9 SEP 2013	FIGURE
Scale NOT TO SCALE	2
Drawn By EMJ	
Submission Date 9 SEP 2013	



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 WWW.LAVIGAN.COM

Project Title
CANSEVOORT MARINE TRANSFER STATION SITE DEMOLITION
 2 BLOOMFIELD STREET
 BLOCK 681, LOT 1
 BOROUGH OF MANNHATTAN
 NEW YORK COUNTY
 NEW YORK

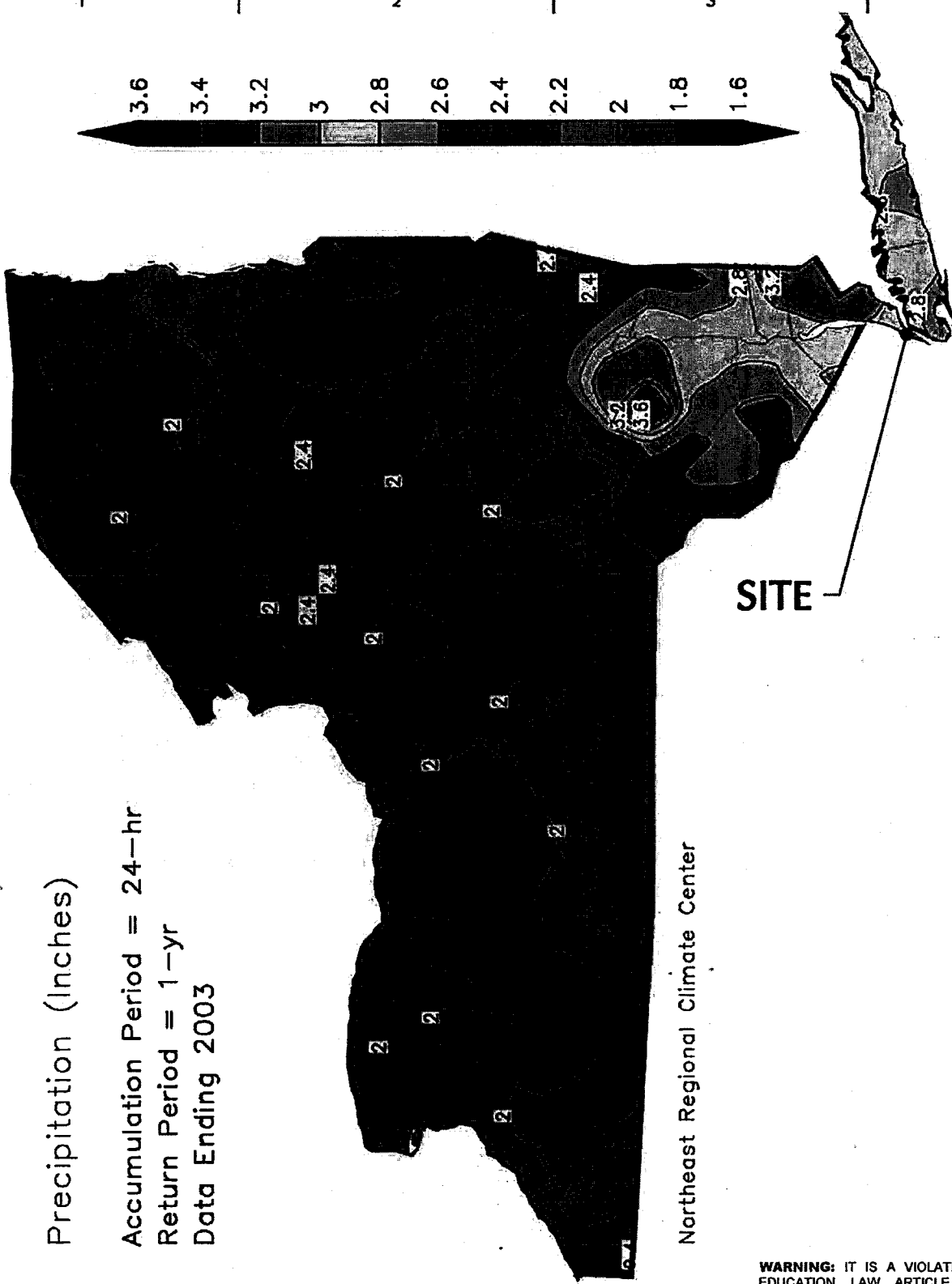
Drawing Title
FEMA PRELIMINARY WORK MAP

Project No. 100331901	Drawing No. FIGURE 3
Date 9 SEP 2013	
Scale NOT TO SCALE	
Drawn By EMJ	
Submission Date 9 SEP 2013	

Filename: \\imga.com\dms\p\000331901\Cadd Data - 100331901\Drawings\Gen\100331901 - SHEET Figure 3 - FEMA Flood Insurance Rate Map.dwg Date: 9/12/2013 Time: 08:46 User: alicia.d.879s Task: Lavigan Job Title: PROJECT SHEET NO 3 - FEMA PRELIMINARY WORK MAP

Precipitation (Inches)

Accumulation Period = 24-hr
 Return Period = 1-yr
 Data Ending 2003



Northeast Regional Climate Center

SITE

DATA SOURCE: 2003 RAINFALL DATA FROM THE NORTHEAST REGIONAL CLIMATE CENTER (<http://www.nrcc.cornell.edu/pptext/isomops.html>)

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 FLORIDA VIRGINIA CALIFORNIA
 ABU DHABI DUBAI ATHENS DOHA ISTANBUL

Project

**GANSEVOORT MARINE
 TRANSFER STATION
 SITE DEMOLITION**
 2 BLOOMFIELD STREET
 BLOCK 651, LOT 1
 BOROUGH OF MANHATTAN

NEW YORK COUNTY NEW YORK

Drawing Title

**CORNELL 24 HOUR
 RAINFALL DATA -
 1 YEAR STORM**

Project No.
 100331901

Date
 06 JAN 2014

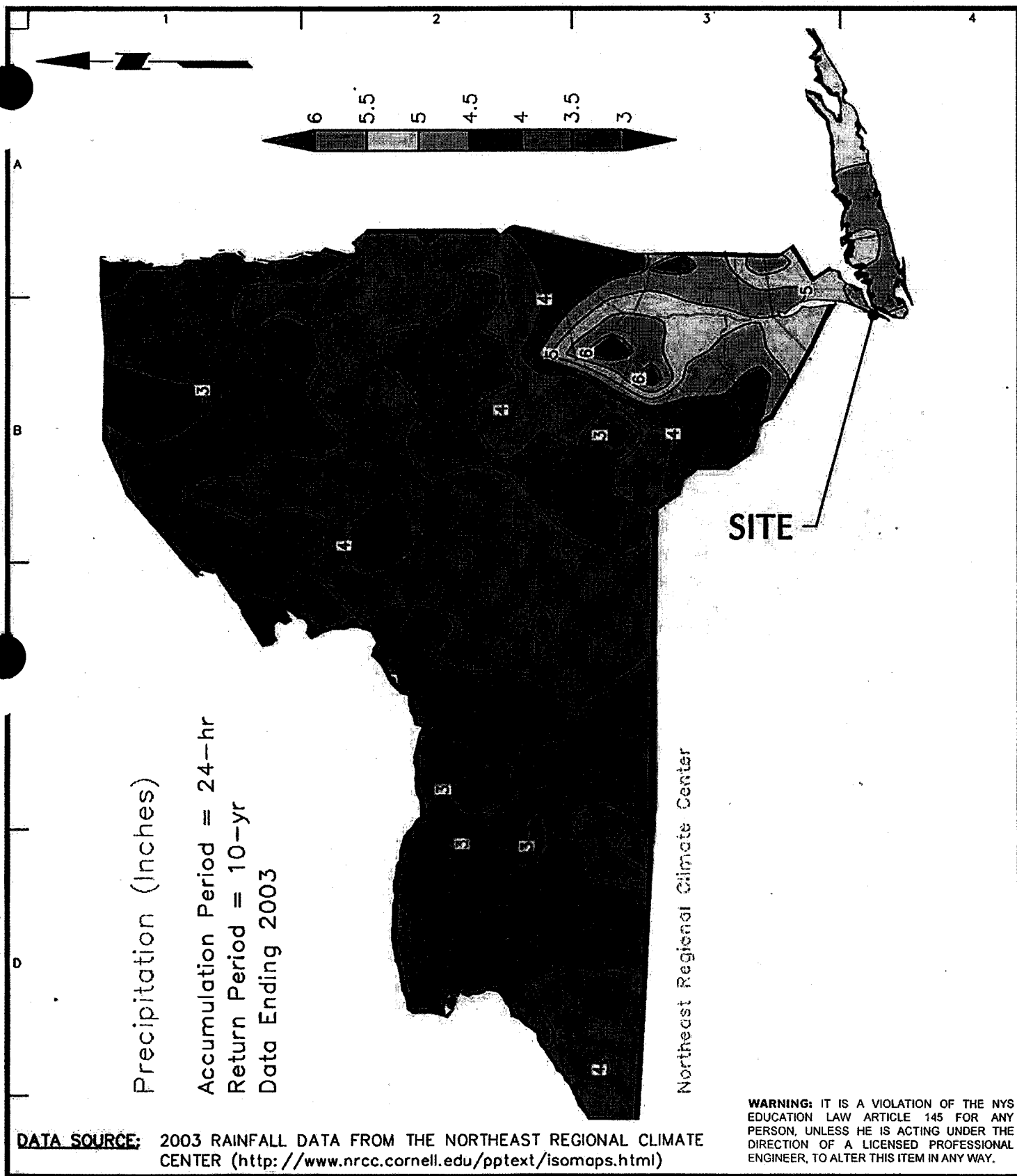
Scale
 NONE

Drawn By
 EMJ

Submission Date
 06 JAN 2014

Drawing No.

**FIGURE
 4**



DATA SOURCE: 2003 RAINFALL DATA FROM THE NORTHEAST REGIONAL CLIMATE CENTER (<http://www.nrcc.cornell.edu/pptext/isomaps.html>)

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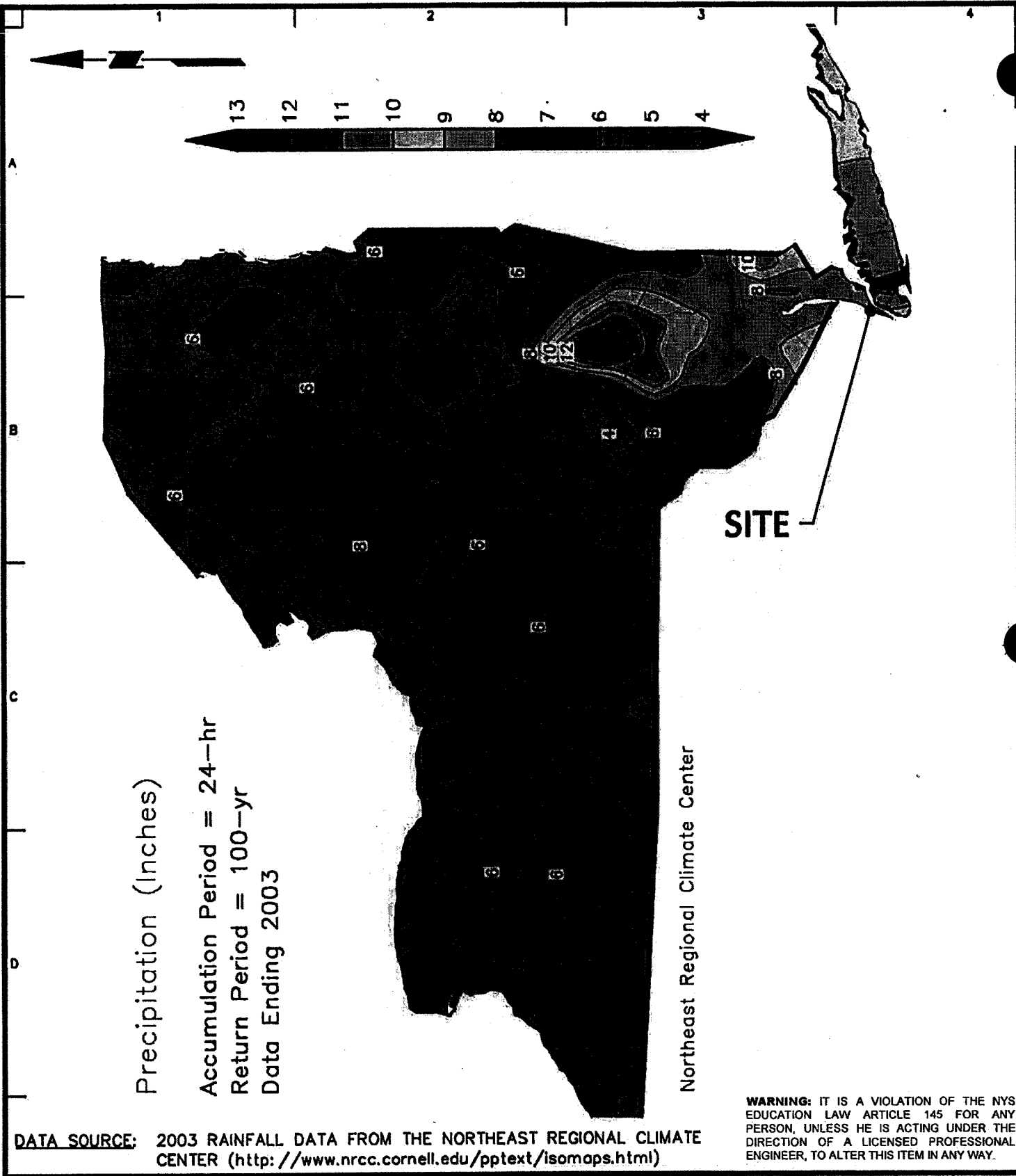
NEW JERSEY	PENNSYLVANIA	NEW YORK	CONNECTICUT
ABU DHABI	FLORIDA	VIRGINIA	CALIFORNIA
	DUBAI	ATHENS	DOHA
		ISTANBUL	

Project
GANSEVOORT MARINE TRANSFER STATION SITE DEMOLITION
2 BLOOMFIELD STREET
BLOCK 651, LOT 1
BOROUGH OF MANHATTAN
NEW YORK COUNTY NEW YORK

Drawing Title
CORNELL 24 HOUR RAINFALL DATA - 10 YEAR STORM

Project No. 100331901
Date 06 JAN 2014
Scale NONE
Drawn By EMJ
Submission Date 06 JAN 2014

Drawing No.
FIGURE 5



WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

DATA SOURCE: 2003 RAINFALL DATA FROM THE NORTHEAST REGIONAL CLIMATE CENTER (<http://www.nrcc.cornell.edu/pptext/isomaps.html>)

<p>LANGAN ENGINEERING & ENVIRONMENTAL SERVICES 21 Penn Plaza 300 West 31st Street, 8th Floor New York, NY 10001-2727 P: 212 479 5400 F: 212 479 5444 www.langan.com</p> <p>NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA VIRGINIA CALIFORNIA ABU DHABI DUBAI ATHENS DOHA ISTANBUL</p>	<p>Project GANSEVOORT MARINE TRANSFER STATION SITE DEMOLITION 2 BLOOMFIELD STREET BLOCK 651, LOT 1 BOROUGH OF MANHATTAN NEW YORK COUNTY NEW YORK</p>	<p>Drawing Title CORNELL 24 HOUR RAINFALL DATA - 100 YEAR STORM</p>	<p>Project No. 100331901</p>	<p>Drawing No. FIGURE 6</p>
			<p>Date 06 JAN 2014</p>	
			<p>Scale NONE</p>	
			<p>Drawn By EMJ</p>	
			<p>Submission Date 06 JAN 2014</p>	

NOTICE OF INTENT

New York State Department of Environmental Conservation

Division of Water

625 Broadway, 4th Floor

NYR

(For DEC use only)

Albany, New York 12233-3505

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-10-001
All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

- IMPORTANT -
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)

City of New York Dept of Sanitation

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Diggins

Owner/Operator Contact Person First Name

Dennis

Owner/Operator Mailing Address

125 Worth Street, Room 726

City

New York

State

NY

Zip

10013 -

Phone (Owner/Operator)

646 - 885 - 4684

Fax (Owner/Operator)

212 - 788 - 3906

Email (Owner/Operator)

ddiggins@dsny.nyc.gov

FED TAX ID

13 - 6400434 (not required for individuals)

Project Site Information

Project/Site Name

G a n s e v o o r t M a r i n e T r a n s f e r S t a t i o n D e m

Street Address (NOT P.O. BOX)

2 B l o o m f i e l d S t r e e t

Side of Street

North South East West

City/Town/Village (THAT ISSUES BUILDING PERMIT)

N e w Y o r k

State

N Y

Zip

1 0 0 1 4 -

County

N e w Y o r k

DEC Region

2

Name of Nearest Cross Street

W e s t S t r e e t (a k a N Y S t a t e R o u t e 9)

Distance to Nearest Cross Street (Feet)

Project In Relation to Cross Street

North South East West

Tax Map Numbers

Section-Block-Parcel

6 5 1

Tax Map Numbers

1

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you must go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

5 8 3 6 3 8

Y Coordinates (Northing)

4 5 1 0 4 1 0

2. What is the nature of this construction project?

- New Construction
- Redevelopment with increase in impervious area
- Redevelopment with no increase in impervious area

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

- Pre-Development Existing Land Use**
- FOREST
 - PASTURE/OPEN LAND
 - CULTIVATED LAND
 - SINGLE FAMILY HOME
 - SINGLE FAMILY SUBDIVISION
 - TOWN HOME RESIDENTIAL
 - MULTIFAMILY RESIDENTIAL
 - INSTITUTIONAL/SCHOOL
 - INDUSTRIAL
 - COMMERCIAL
 - ROAD/HIGHWAY
 - RECREATIONAL/SPORTS FIELD
 - BIKE PATH/TRAIL
 - LINEAR UTILITY
 - PARKING LOT
 - OTHER

s o l i d w a s t e

transfer station and DSNY garages

- Post-Development Future Land Use**
- SINGLE FAMILY HOME
 - SINGLE FAMILY SUBDIVISION
 - TOWN HOME RESIDENTIAL
 - MULTIFAMILY RESIDENTIAL
 - INSTITUTIONAL/SCHOOL
 - INDUSTRIAL
 - COMMERCIAL
 - MUNICIPAL
 - ROAD/HIGHWAY
 - RECREATIONAL/SPORTS FIELD
 - BIKE PATH/TRAIL
 - LINEAR UTILITY (water, sewer, gas, etc.)
 - PARKING LOT
 - CLEARING/GRADING ONLY
 - DEMOLITION, NO REDEVELOPMENT
 - WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
 - OTHER

Number of Lots

--	--	--

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

*Note: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area																								
<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">4</td> <td style="width: 20px; height: 20px;">.</td> <td style="width: 20px; height: 20px;">7</td> </tr> </table>				4	.	7	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">4</td> <td style="width: 20px; height: 20px;">.</td> <td style="width: 20px; height: 20px;">7</td> </tr> </table>				4	.	7	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">4</td> <td style="width: 20px; height: 20px;">.</td> <td style="width: 20px; height: 20px;">7</td> </tr> </table>				4	.	7	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">1</td> <td style="width: 20px; height: 20px;">.</td> <td style="width: 20px; height: 20px;">3</td> </tr> </table>				1	.	3
			4	.	7																						
			4	.	7																						
			4	.	7																						
			1	.	3																						

5. Do you plan to disturb more than 5 acres of soil at any one time? Yes No

6. Indicate the percentage of each Hydrologic Soil Group (HSG) at the site.

<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">%</td> </tr> </table>					%	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">%</td> </tr> </table>					%	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;">%</td> </tr> </table>					%	<table border="1" style="display: inline-table;"> <tr> <td style="width: 20px; height: 20px;">1</td> <td style="width: 20px; height: 20px;">0</td> <td style="width: 20px; height: 20px;">0</td> <td style="width: 20px; height: 20px;">%</td> </tr> </table>	1	0	0	%
				%																		
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1	0	0	%																			

7. Is this a phased project? Yes No

8. Enter the planned start and end dates of the disturbance activities.

Start Date **End Date**

0	6	/		/	2	0	1	4	-	0	6	/		/	2	0	1	6
---	---	---	--	---	---	---	---	---	---	---	---	---	--	---	---	---	---	---

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

H	u	d	s	o	n		R	i	v	e	r																

9a. Type of waterbody identified in Question 9?

- Wetland / State Jurisdiction On Site (Answer 9b)
- Wetland / State Jurisdiction Off Site
- Wetland / Federal Jurisdiction On Site (Answer 9b)
- Wetland / Federal Jurisdiction Off Site
- Stream / Creek On Site
- Stream / Creek Off Site
- River On Site
- River Off Site
- Lake On Site
- Lake Off Site
- Other Type On Site
- Other Type Off Site

9b. How was the wetland identified?

- Regulatory Map
- Delineated by Consultant
- Delineated by Army Corps of Engineers
- Other (identify)

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

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

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-10-001? Yes No

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-10-001? Yes No

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? Yes No
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? Yes No
If Yes, what is the acreage to be disturbed?

--	--	--	--	--

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? Yes No

25. Has a construction sequence schedule for the planned management practices been prepared? Yes No

26. Select all of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- Check Dams
- Construction Road Stabilization
- Dust Control
- Earth Dike
- Level Spreader
- Perimeter Dike/Swale
- Pipe Slope Drain
- Portable Sediment Tank
- Rock Dam
- Sediment Basin
- Sediment Traps
- Silt Fence
- Stabilized Construction Entrance
- Storm Drain Inlet Protection
- Straw/Hay Bale Dike
- Temporary Access Waterway Crossing
- Temporary Stormdrain Diversion
- Temporary Swale
- Turbidity Curtain
- Water bars

Biotechnical

- Brush Matting
- Wattling

Other

S	i	t	e		w	i	l	l		b	e		s	t	a	b	i	l	i	z	e	d		w	i	t	h		9		i	n	c	h	e	s		o	f		
c	r	u	s	h	e	d		s	t	o	n	e		a	f	t	e	r		d	e	m	o	l	i	t	i	o	n												

Vegetative Measures

- Brush Matting
- Dune Stabilization
- Grassed Waterway
- Mulching
- Protecting Vegetation
- Recreation Area Improvement
- Seeding
- Sodding
- Straw/Hay Bale Dike
- Streambank Protection
- Temporary Swale
- Topsoiling
- Vegetating Waterways

Permanent Structural

- Debris Basin
- Diversion
- Grade Stabilization Structure
- Land Grading
- Lined Waterway (Rock)
- Paved Channel (Concrete)
- Paved Flume
- Retaining Wall
- Riprap Slope Protection
- Rock Outlet Protection
- Streambank Protection

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- Preservation of Undisturbed Areas
- Preservation of Buffers
- Reduction of Clearing and Grading
- Locating Development in Less Sensitive Areas
- Roadway Reduction
- Sidewalk Reduction
- Driveway Reduction
- Cul-de-sac Reduction
- Building Footprint Reduction
- Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual (2010 version).

- All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- Compacted areas were considered as impervious cover when calculating the WQv Required, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

. acre-feet

29. Identify the RR techniques (Area Reduction), RR techniques (Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required (#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	<u>Total Contributing Area (acres)</u>		<u>Total Contributing Impervious Area (acres)</u>	
<u>RR Techniques (Area Reduction)</u>				
<input type="radio"/> Conservation of Natural Areas (RR-1) ...	□□□□	□□□□	and/or	□□□□ □□□□
<input type="radio"/> Sheetflow to Riparian Buffers/Filters Strips (RR-2)	□□□□	□□□□	and/or	□□□□ □□□□
<input type="radio"/> Tree Planting/Tree Pit (RR-3)	□□□□	□□□□	and/or	□□□□ □□□□
<input type="radio"/> Disconnection of Rooftop Runoff (RR-4) ..	□□□□	□□□□	and/or	□□□□ □□□□
<u>RR Techniques (Volume Reduction)</u>				
<input type="radio"/> Vegetated Swale (RR-5)				□□□□ □□□□
<input type="radio"/> Rain Garden (RR-6)				□□□□ □□□□
<input type="radio"/> Stormwater Planter (RR-7)				□□□□ □□□□
<input type="radio"/> Rain Barrel/Cistern (RR-8)				□□□□ □□□□
<input type="radio"/> Porous Pavement (RR-9)				□□□□ □□□□
<input type="radio"/> Green Roof (RR-10)				□□□□ □□□□
<u>Standard SMPs with RRv Capacity</u>				
<input type="radio"/> Infiltration Trench (I-1)				□□□□ □□□□
<input type="radio"/> Infiltration Basin (I-2)				□□□□ □□□□
<input type="radio"/> Dry Well (I-3)				□□□□ □□□□
<input type="radio"/> Underground Infiltration System (I-4)				□□□□ □□□□
<input type="radio"/> Bioretention (F-5)				□□□□ □□□□
<input type="radio"/> Dry Swale (O-1)				□□□□ □□□□
<u>Standard SMPs</u>				
<input type="radio"/> Micropool Extended Detention (P-1)				□□□□ □□□□
<input type="radio"/> Wet Pond (P-2)				□□□□ □□□□
<input type="radio"/> Wet Extended Detention (P-3)				□□□□ □□□□
<input type="radio"/> Multiple Pond System (P-4)				□□□□ □□□□
<input type="radio"/> Pocket Pond (P-5)				□□□□ □□□□
<input type="radio"/> Surface Sand Filter (F-1)				□□□□ □□□□
<input type="radio"/> Underground Sand Filter (F-2)				□□□□ □□□□
<input type="radio"/> Perimeter Sand Filter (F-3)				□□□□ □□□□
<input type="radio"/> Organic Filter (F-4)				□□□□ □□□□
<input type="radio"/> Shallow Wetland (W-1)				□□□□ □□□□
<input type="radio"/> Extended Detention Wetland (W-2)				□□□□ □□□□
<input type="radio"/> Pond/Wetland System (W-3)				□□□□ □□□□
<input type="radio"/> Pocket Wetland (W-4)				□□□□ □□□□
<input type="radio"/> Wet Swale (O-2)				□□□□ □□□□

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv (= Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

- 33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided
 . acre-feet

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).

.

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? Yes No

If Yes, go to question 36.
 If No, the sizing criteria has not been met. Contact Regional Office stormwater contact person to discuss next steps.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required
 . acre-feet

CPv Provided
 . acre-feet

- 36a. The need to provide channel protection has been waived because:

- Site discharges directly to tidal waters or a fifth order or larger stream.
- Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development
 . CFS

Post-development
 . CFS

Total Extreme Flood Control Criteria (Qf)

Pre-Development
 . CFS

Post-development
 . CFS

37a. The need to meet the Qp and Qf criteria has been waived because:

- Site discharges directly to tidal waters or a fifth order or larger stream.
- Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? Yes No

If Yes, Identify the entity responsible for the long term Operation and Maintenance

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a)
 This space can also be used for other pertinent project information.

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name

D	e	n	n	i	s														
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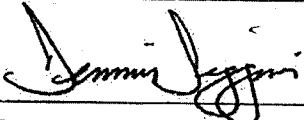
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Print Last Name

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Owner/Operator Signature



Date

0	1	1	0	1	2	0	1	4
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NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

from

CONSTRUCTION ACTIVITY

Permit No. GP-0-10-001

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2010

Expiration Date: January 28, 2015

William R. Adriance
Chief Permit Administrator

William R. Adriance
Authorized Signature

January 28, 2010
Date

Address: NYS DEC
Div. Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York's *State Pollutant Discharge Elimination System ("SPDES")* is a NPDES-approved program with permits issued in accordance with the *Environmental Conservation Law ("ECL")*.

This general permit ("permit") is issued pursuant to Article 17, Titles 7, 8 and Article 70 of the ECL. An *owner or operator* may obtain coverage under this permit by submitting a Notice of Intent ("NOI") to the Department. Copies of this permit and the NOI for New York are available by calling (518) 402-8109 or at any New York State Department of Environmental Conservation ("the Department") regional office (see Appendix G). They are also available on the Department's website at:

<http://www.dec.ny.gov/>

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a point source and therefore, pursuant to Article 17-0505 of the ECL, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. They cannot wait until there is an actual *discharge* from the construction site to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES

FROM CONSTRUCTION ACTIVITIES

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Part I. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application - This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State*.
3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

B. Maintaining Water Quality - It shall be a violation of this permit and the *ECL* for any *discharge* to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

C. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph D. of this Part.
2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater discharges from *construction activities*.

(Part I. C)

3. Notwithstanding paragraphs C.1 and C.2 above, the following non-stormwater *discharges* may be authorized by this permit: discharges from fire fighting activities; fire hydrant flushings; waters to which cleansers or other components have not been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated groundwater or spring water; uncontaminated discharges from construction site de-watering operations; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this permit, and who discharge as noted in this paragraph, and with the exception of flows from fire fighting activities, these discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with water quality standards in Part I.B.

D. Activities Which Are Ineligible for Coverage Under This General Permit - All of the following are **not** authorized by this permit:

1. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;
2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection C.3. of this Part and identified in the SWPPP required by this permit;
3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII, subparagraph K of this permit;
4. *Discharges* from *construction activities* that adversely affect a listed, or proposed to be listed, endangered or threatened species, or its critical habitat;
5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;
6. *Construction activities* for residential, commercial and institutional projects that:
 - a. are tributary to waters of the state classified as AA or AA-s; and

(Part I. D. 6)

- b. disturb one or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.
7. *Construction activities* for linear transportation projects and linear utility projects that:
 - a. are tributary to waters of the state classified as AA or AA-s; and
 - b. disturb two or more acres of land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey for the County in which the disturbance will occur.
8. *Construction activities* that adversely affect a property that is listed or is eligible for listing on the State or National Register of Historic Places (Note: includes Archeological sites), unless there are written agreements in place with the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) or other governmental agencies to mitigate the effects, or there are local land use approvals evidencing the same.

Part II. OBTAINING PERMIT COVERAGE

A. Notice of Intent (NOI) Submittal

1. An owner or operator of a construction activity that is not subject to the requirements of a *regulated, traditional land use control MS4* must first develop a SWPPP in accordance with all applicable requirements of this permit and then submit a completed NOI form to the address below in order to be authorized to *discharge* under this permit. The NOI form shall be one which is associated with this permit, signed in accordance with Part VII.H. of this permit.

NOTICE OF INTENT
NYS DEC, Bureau of Water Permits
625 Broadway, 4th Floor
Albany, New York 12233-3505

2. An owner or operator of a construction activity that is subject to the requirements of a *regulated, traditional land use control MS4* must first develop a SWPPP in accordance with all applicable requirements of this permit and then have its SWPPP reviewed and accepted by the *MS4* prior to submitting the NOI to the Department. The owner or operator shall have the "MS4 SWPPP Acceptance" form signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person, and then submit that form along with the NOI to the address referenced under "Notice of Intent (NOI) Submittal".

(Part II. A.2)

This requirement does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.E. (Change of Owner or Operator).

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.
4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

B. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.
2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:
 - a. project review pursuant to the State Environmental Quality Review Act (SEQRA) have been satisfied, when SEQRA is applicable,
 - b. where required, all necessary Department permits subject to the *Uniform Procedures Act (UPA)* (see 6 NYCRR Part 621) have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators of construction activities* that are required to obtain *UPA* permits must submit a preliminary SWPPP to the appropriate DEC Regional Office in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,
 - c. the final SWPPP has been prepared, and
 - d. an NOI has been submitted to the Department in accordance with the requirements of this permit.
3. An *owner or operator* that has satisfied the requirements of Part II.B.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

(Part II. B. 3)

- a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:
 - i. Five (5) business days from the date the Department receives a complete NOI for *construction activities* with a SWPPP that has been prepared in conformance with the technical standards referenced in Parts III.B.1, 2 and/or 3, or
 - ii. Sixty (60) business days from the date the Department receives a complete NOI for *construction activities* with a SWPPP that has not been prepared in conformance with the technical standards referenced in Parts III.B.1, 2 or 3.
- b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:
 - i. Five (5) business days from the date the Department receives a complete NOI and signed "MS4 SWPPP Acceptance" form,
4. The Department may suspend or deny an *owner's or operator's* coverage under this permit if the Department determines that the SWPPP does not meet the permit requirements.
5. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department.

C. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (NOT) has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4.
2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-10-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form and inspection reports at the construction site until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department.

(Part II. C. 2)

The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the MS4 (provided the MS4 is not the *owner or operator* of the construction activity). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:
 - a. The *owner or operator* shall have a *qualified inspector* conduct at least two (2) site inspections in accordance with Part IV.C. every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - b. In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.
 - c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
 - d. The *owner or operator* shall install any additional site specific practices needed to protect water quality.
 - e. The *owner or operator* shall include the requirements above in their SWPPP.
4. The Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements.

(Part II. C)

5. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the *MS4* in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *MS4* prior to commencing construction of the post-construction stormwater management practice.

D. Permit Coverage for Discharges Authorized Under GP-0-08-001

1. Upon renewal of SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-08-001), an *owner or operator* of *construction activity* with coverage under GP-0-08-001, as of the effective date of GP-0-10-001, shall be authorized to *discharge* in accordance with GP-0-10-001 unless otherwise notified by the Department.

E. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.A.1.. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or operator* was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*.

(Part III. A)

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the pollutants in stormwater discharges and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP:
 - a. whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater *discharges* from the site;
 - b. whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants; and
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, the Department or other regulatory authority.
5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit.
6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP.

(Part III. A. 6)

The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings. "

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the construction site. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.
8. The SWPPP must include documentation supporting the determination of permit eligibility with regard to Part I.D.8. (Historic Places or Archeological Resource). At a minimum, the supporting documentation shall include the following:

(Part III. A. 8)

- a. Information on whether the stormwater discharge or *construction activities* would have an effect on a property (historic or archeological resource) that is listed or eligible for listing on the State or National Register of Historic Places;
- b. Results of historic resources screening determinations conducted. Information regarding the location of historic places listed, or eligible for listing, on the State or National Registers of Historic Places and areas of archeological sensitivity that may indicate the need for a survey can be obtained online by viewing the New York State Office of Parks, Recreation and Historic Places (OPRHP) online resources located on their web site at: <http://nysparks.state.ny.us/shpo/online-tools/> (using The Geographic Information System for Archeology and National Register). OPRHP can also be contacted at: NYS OPRHP, State Historic Preservation Office, Peebles Island Resources Center, P.O. Box 189, Waterford, NY 12188-0189, phone: 518-237-8643;
- c. A description of measures necessary to avoid or minimize adverse impacts on places listed, or eligible for listing, on the State or National Register of Historic Places. If the *owner or operator* fails to describe and implement such measures, the stormwater *discharge* is ineligible for coverage under this permit; and
- d. Where adverse effects may occur, any written agreements in place with OPRHP or other governmental agency to mitigate those effects, or local land use approvals evidencing the same.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control. Where erosion and sediment control practices are not designed in conformance with this technical standard, the *owner or operator* must demonstrate equivalence to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:
 - a. Background information about the scope of the project, including the location, type and size of project;

(Part III. B. 1)

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater discharge(s);
- c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each construction activity that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- f. A temporary and permanent soil stabilization plan that meets the requirements of the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of final stabilization;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

(Part III. B. 1)

- i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6., to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule shall be in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control;
 - j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in the stormwater *discharges*;
 - k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the construction site; and
 - l. Identification of any elements of the design that are not in conformance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards.
2. Post-construction stormwater management practice component - All construction projects identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). If the Design Manual is revised during the term of this permit, an *owner or operator* must begin using the revised version of the Design Manual to prepare their SWPPP six (6) months from the final revision date of the Design Manual.

Where post-construction stormwater management practices are not designed in conformance with this technical standard, the *owner or operator* must demonstrate equivalence to the technical standard.

At a minimum, the post-construction stormwater management practice component of the SWPPP shall include the following:

- a. Identification of all post-construction stormwater management practices to be constructed as part of the project;

(Part III. B. 2)

- b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;
 - c. The dimensions, material specifications and installation details for each post-construction stormwater management practice;
 - d. Identification of any elements of the design that are not in conformance with the Design Manual. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is equivalent to the technical standards;
 - e. A hydrologic and hydraulic analysis for all structural components of the stormwater management control system;
 - f. A detailed summary (including calculations) of the sizing criteria that was used to design all post-construction stormwater management practices. At a minimum, the summary shall address the required design criteria from the applicable chapter of the Design Manual; including the identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required based on the design criteria or waiver criteria included in the Design Manual; and
 - g. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.
3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.g. above.

(Part III. C)

C. Required SWPPP Components by Project Type - Unless otherwise notified by the Department, *owners or operators of construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are maintained in effective operating condition at all times.
2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York, or protect the public health and safety and/or the environment.

B. Owner or Operator Maintenance Inspection Requirements

1. The *owner or operator* shall inspect, in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, the erosion and sediment controls identified in the SWPPP to ensure that they are being maintained in effective operating condition at all times.
2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the *owner or operator* can stop conducting the maintenance inspections. The *owner or operator* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.
3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *owner or operator* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

(Part IV. C)

C. Qualified Inspector Inspection Requirements - The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- Licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- Registered Landscape Architect, or
- Someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:

- a. the construction of a single family residential subdivision with 25% or less impervious cover at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;
- b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;
- c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and
- d. construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

- a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.

(Part IV. C. 2)

- b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.C.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
- c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the Regional Office stormwater contact person (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the MS4 (provided the MS4 is not the *owner or operator* of the construction activity) in writing prior to reducing the frequency of inspections.
- d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the Regional Office stormwater contact person (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the MS4 (provided the MS4 is not the *owner or operator* of the construction activity). in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.A.1..

(Part IV. C. 3)

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization*, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.
4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:
 - a. Date and time of inspection;
 - b. Name and title of person(s) performing inspection;
 - c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
 - d. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
 - e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;
 - f. Identification of all erosion and sediment control practices that need repair or maintenance;
 - g. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
 - h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;

(Part IV. C 4)

- i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
 - j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and
 - k. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
 6. All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.C.2., the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.A.1. The NOT form shall be one which is associated with this general permit, signed in accordance with Part VII.H.
2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

(Part V. A. 2)

- a. Total project completion - All construction activity identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;
 - b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;
 - c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.E.
3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT, certify that all disturbed areas have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP.
 4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall also have the MS4 sign the "MS4 Acceptance" statement on the NOT. The *owner or operator* shall have the principal executive officer, ranking elected official, or duly authorized representative from the *regulated, traditional land use control MS4*, sign the "MS4 Acceptance" statement. The MS4 official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The MS4 can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector's* final site inspection certification(s) required in Part V.3.
 5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

(Part V. A. 5)

- a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,
- b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),
- c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has modified their deed of record to include a deed covenant that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan,
- d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, college, university), or government agency or authority, the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION OF RECORDS

A. Record Retention - The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the site achieves *final stabilization*. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

B. Addresses - With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.A.1), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate Department Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply - The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied.

(Part VII. A)

The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

B. Continuation of the Expired General Permit - This permit expires five (5) years from the effective date. However, coverage may be obtained under the expired general permit, which will continue in force and effect, until a new general permit is issued. Unless otherwise notified by the Department in writing, an *owner or operator* seeking authorization under the new general permit must submit a new NOI in accordance with the terms of such new general permit.

C. Enforcement - Failure of the *owner or operator*, its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense - It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate - The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to minimize or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information - The *owner or operator* shall make available to the Department for review and copying or furnish to the Department within five (5) business days of receipt of a Department request for such information, any information requested for the purpose of determining compliance with this permit. This can include, but is not limited to, the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form, executed maintenance agreement, and inspection reports. Failure to provide information requested by the Department within the request timeframe shall be a violation of this permit.

The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review the NOI, SWPPP or inspection reports. Copying of documents will be done at the requester's expense.

G. Other Information - When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any other report, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s)

(Part VII. G)

changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or impervious area), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

i. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

ii. the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

i. the chief executive officer of the agency, or

(Part VII. H. 1. c)

- ii. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part VII.H.1.;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,
 - c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
 3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
 4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights - The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability - The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

(Part VII. K)

K. Denial of Coverage Under This Permit

1. At its sole discretion, the Department may require any *owner or operator* authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from *owner or operator* receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Regional Water Engineer, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.
2. Any *owner or operator* authorized by this permit may request to be excluded from the coverage under this permit by applying for an individual permit or another general permit. In such cases, the *owner or operator* shall submit an individual application or an alternative general permit application in accordance with the requirements of this general permit, 40 CFR 122.26(c)(1)(ii) and 6 NYCRR Part 621, with reasons supporting the request, to the Department at the address for the appropriate Department Office (see addresses in Appendix F). The request may be granted by issuance of an individual permit or another general permit at the discretion of the Department.
3. When an individual SPDES permit is issued to a discharger authorized to discharge under a general SPDES permit for the same discharge(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance - The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry - The *owner or operator* shall allow the Department or an authorized representative of EPA, the State, or, in the case of a construction site which discharges through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

(Part VII. M)

1. Enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

N. Permit Actions - At the Department's sole discretion, this permit may, at any time, be modified, suspended, revoked, or renewed. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions - Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with *construction activity* covered by this permit, the *owner or operator* of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
2. Permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports - Article 17 of the ECL provides for a civil penalty of \$37,500 per day per violation of this permit. Articles 175 and 210 of the New York State Penal Law provide for a criminal penalty of a fine and/or imprisonment for falsifying forms and reports required by this permit.

R. Other Permits - Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A

Definitions

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for "Construction Activity(ies)" also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a construction site by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a construction site to a separate storm sewer system and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or point source.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 authorizing a category of discharges.

Groundwater - means waters in the saturated zone. The saturated zone is a subsurface zone in

which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct construction activities are occurring, or will occur, under one plan. The term "plan" in "larger common plan of development or sale" is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- i. Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
- ii. Designed or used for collecting or conveying stormwater;
- iii. Which is not a *combined sewer*; and
- iv. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from construction activity.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in Parts 700 et seq of this Title.

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics in order to prepare a SWPPP that conforms to the Department's technical standard. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is required to gain coverage under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

Routine Maintenance Activity - means construction activity that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Stream bank restoration projects (does not include the placement of spoil material),
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that makes the transition between the road shoulder and the ditch or embankment,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or embankment,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* will be responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B

Required SWPPP Components by Project Type

Table 1

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E
- Construction of a barn or other agricultural building, silo, stock yard or pen.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Bike paths and trails
- Sidewalk construction projects that are not part of a road/ highway construction or reconstruction project
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields), excluding projects that *alter hydrology from pre to post development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of less than five acres and construction activities that include the construction or reconstruction of *impervious area*

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP
THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other agricultural building(e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional, includes hospitals, prisons, schools and colleges
- Industrial facilities, includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's and water treatment plants
- Office complexes
- Sports complexes
- Racetracks, includes racetracks with earthen (dirt) surface
- Road construction or reconstruction
- Parking lot construction or reconstruction
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover*, and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project or other linear utility project
- All other construction activities that include the construction or reconstruction of *impervious area* and *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C

Watersheds Where Enhanced Phosphorus Removal Standards Are Required

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed - Figure 3
- Oscawana Lake Watershed - Figure 4

Figure 1 - New York City Watershed East of the Hudson

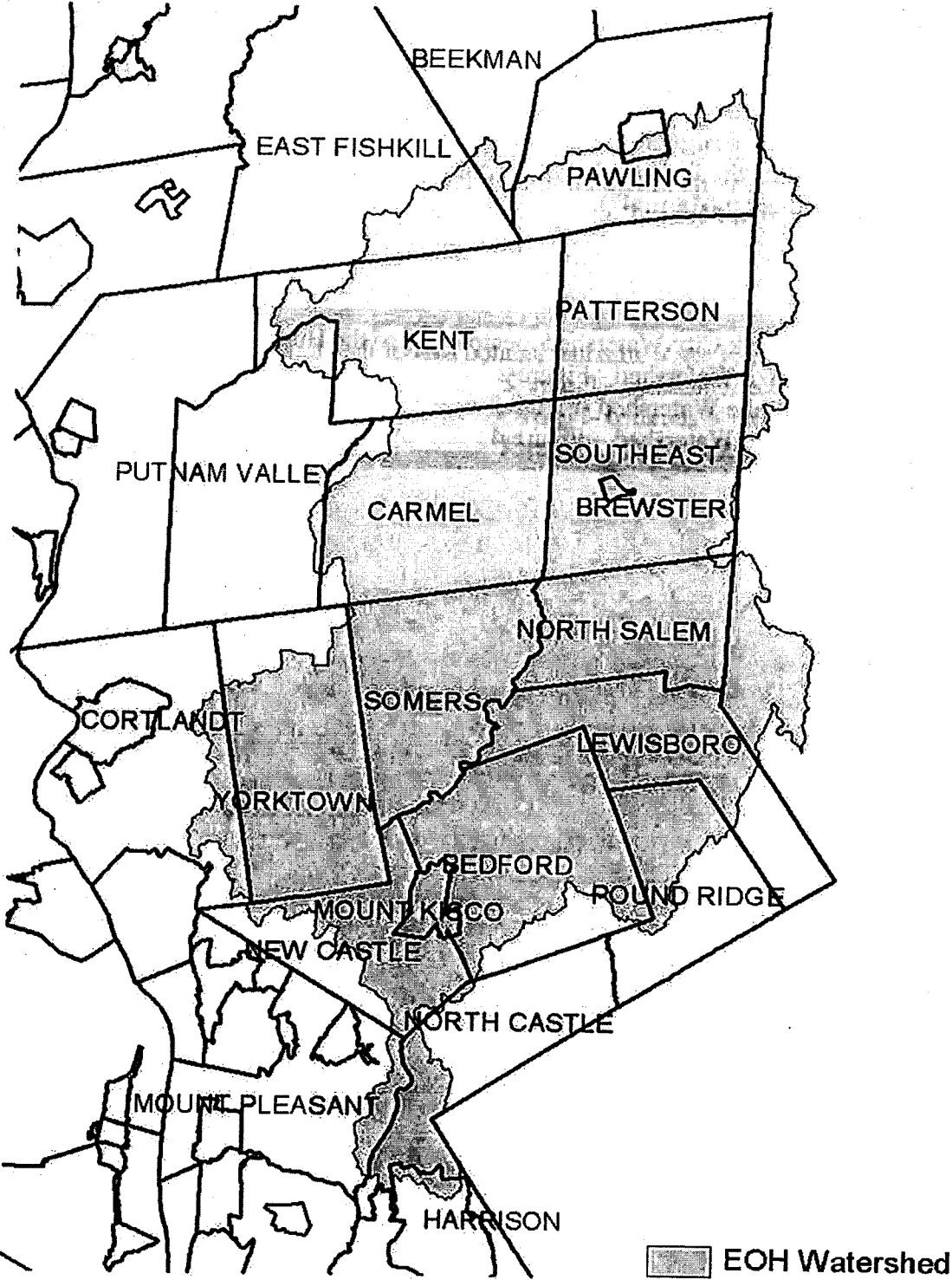


Figure 2 - Onondaga Lake Watershed

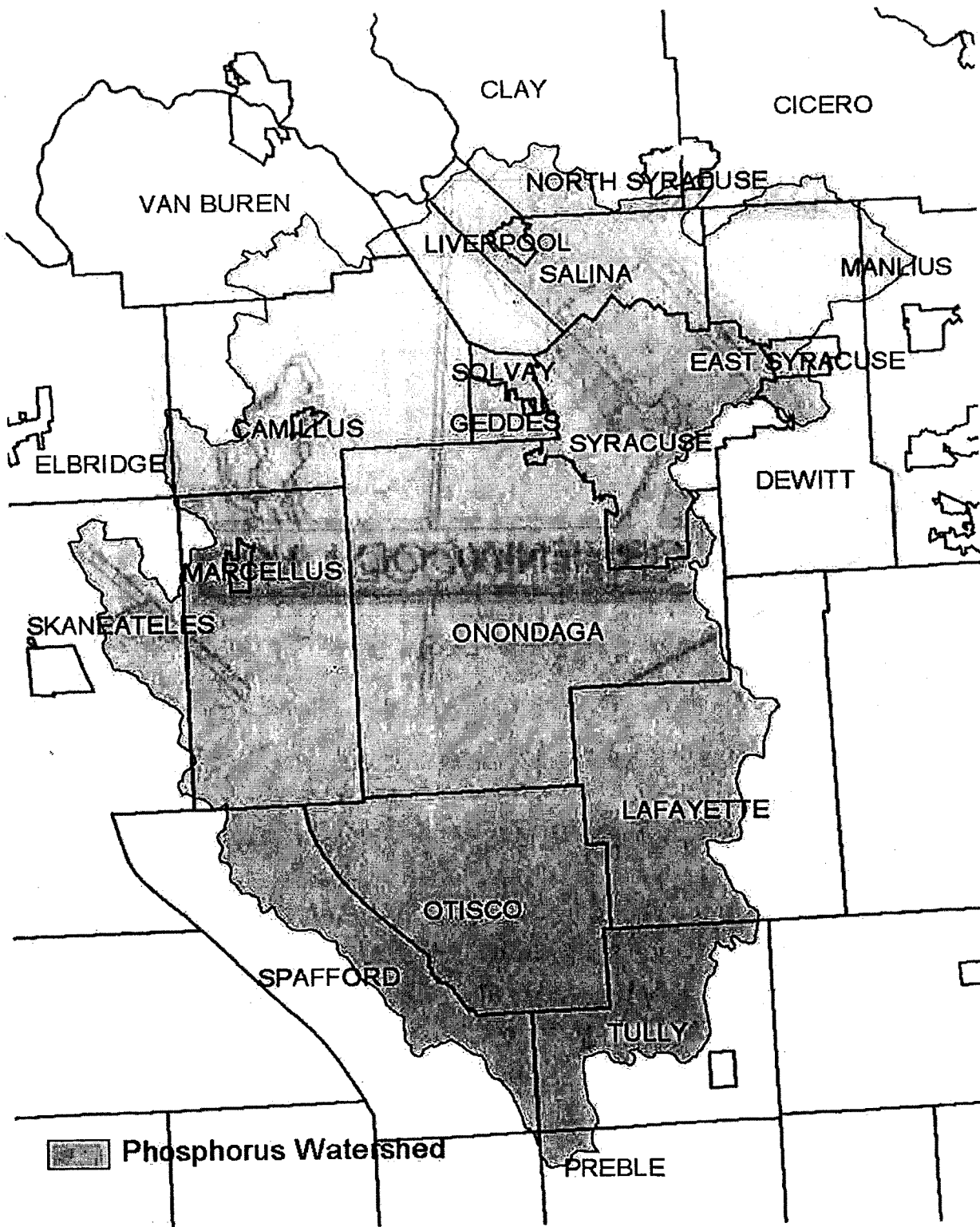


Figure 3 - Greenwood Lake Watershed

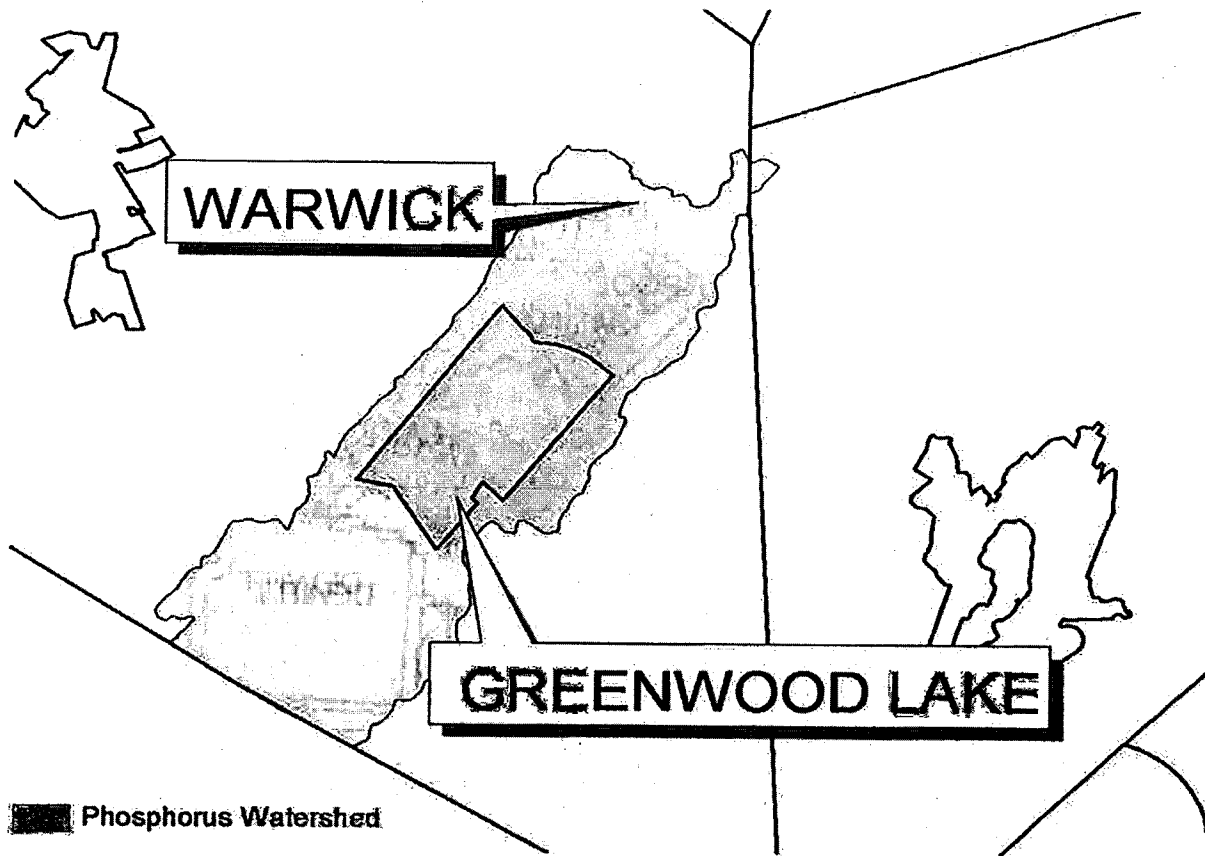
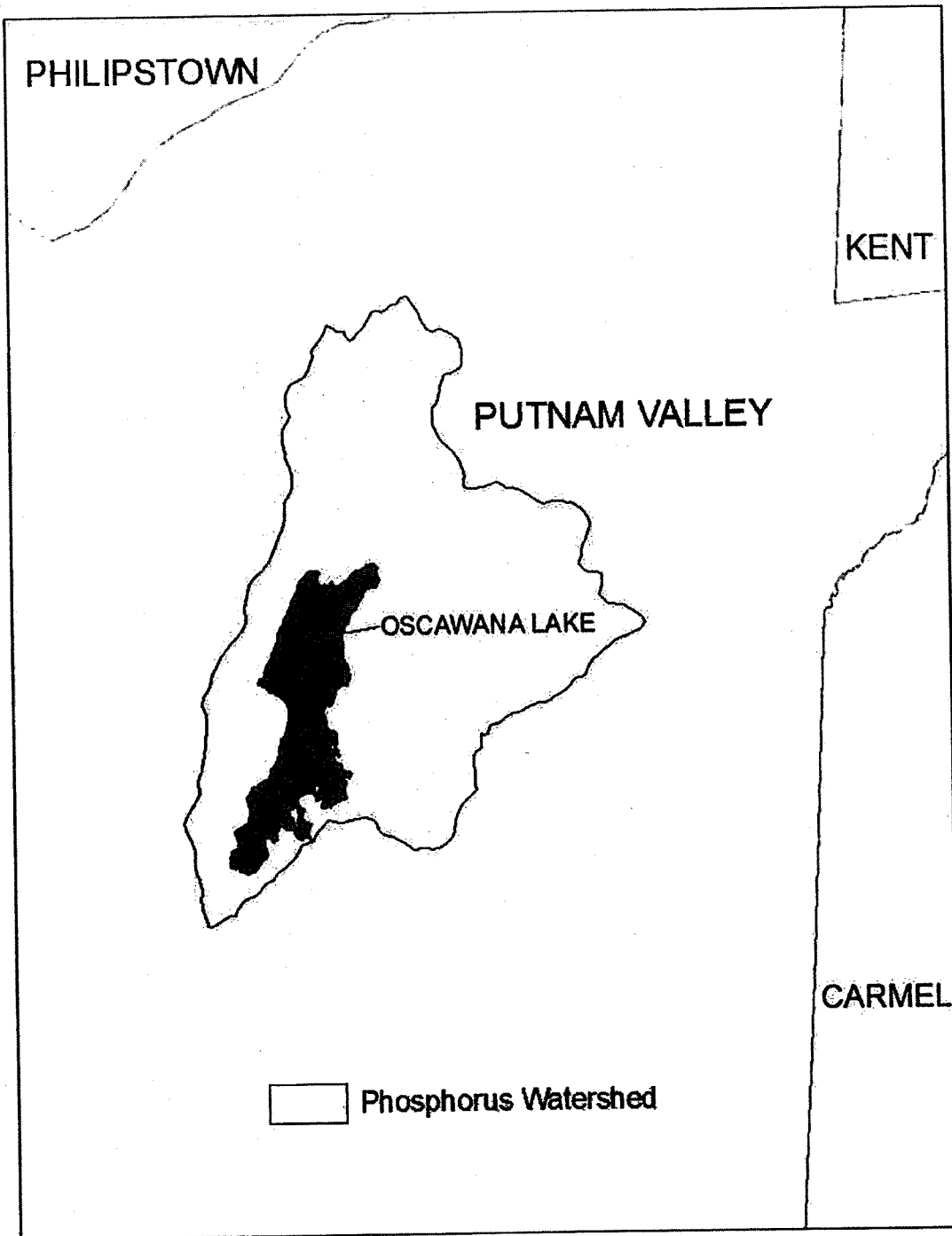


Figure 4 - Oscawana Lake Watershed



APPENDIX D

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity (e.g. silt, sediment or nutrients). *Owners or operators* of single family home and single family residential subdivision construction activities that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

COUNTY	WATERBODY	COUNTY	WATERBODY
Albany	Ann Lee (Shakers) Pond, Stump Pond	Monroe	Genesee River, Lower, Main Stem
Albany	Basic Creek Reservoir	Monroe	Genesee River, Middle, Main Stem
Bronx	Van Cortlandt Lake	Monroe	Black Creek, Lower, and minor tribs
Broome	Whitney Point Lake/Reservoir	Monroe	Buck Pond
Broome	Beaver Lake	Monroe	Long Pond
Broome	White Birch Lake	Monroe	Cranberry Pond
Chautauqua	Chautauqua Lake, North	Monroe	Mill Creek and tribs
Chautauqua	Chautauqua Lake, South	Monroe	Shipbuilders Creek and tribs
Chautauqua	Bear Lake	Monroe	Minor tribs to Irondequoit Bay
Chautauqua	Chadakoin River and tribs	Monroe	Thomas Creek/White Brook and tribs
Chautauqua	Lower Cassadaga Lake	Nassau	Glen Cove Creek, Lower, and tribs
Chautauqua	Middle Cassadaga Lake	Nassau	LI Tribs (fresh) to East Bay
Chautauqua	Findley Lake	Nassau	East Meadow Brook, Upper, and tribs
Clinton	Great Chazy River, Lower, Main Stem	Nassau	Hempstead Bay
Columbia	Kinderhook Lake	Nassau	Hempstead Lake
Columbia	Robinson Pond	Nassau	Grant Park Pond
Dutchess	Hillside Lake	Niagara	Bergholtz Creek and tribs
Dutchess	Wappinger Lakes	Oneida	Ballou, Nail Creeks
Dutchess	Fall Kill and tribs	Onondaga	Ley Creek and tribs
Dutchess	Rudd Pond	Onondaga	Onondaga Creek, Lower and tribs
Erie	Rush Creek and tribs	Onondaga	Onondaga creek, Middle and tribs
Erie	Ellicott Creek, Lower, and tribs	Onondaga	Onondaga Creek, Upper, and minor tribs
Erie	Beeman Creek and tribs	Onondaga	Harbor Brook, Lower, and tribs
Erie	Murder Creek, Lower, and tribs	Onondaga	Ninemile Creek, Lower, and tribs
Erie	South Branch Smoke Cr, Lower, and tribs	Onondaga	Minor tribs to Onondaga Lake
Erie	Little Sister Creek, Lower, and tribs	Ontario	Honeoye Lake
Essex	Lake George (primary county listed as Warren)	Ontario	Hemlock Lake Outlet and minor tribs
Genesee	Black Creek, Upper, and minor tribs	Ontario	Great Brook and minor tribs
Genesee	Tonawanda Creek, Middle, Main Stem	Oswego	Lake Neatahwanta
Genesee	Tonawanda Creek, Upper, and minor tribs	Putnam	Oscawana Lake
Genesee	Little Tonawanda Creek, Lower, and tribs	Putnam	Lake Carmel
Genesee	Oak Orchard Creek, Upper, and tribs	Queens	Jamaica Bay, Eastern, and tribs (Queens)
Genesee	Bowen Brook and tribs	Queens	Bergen Basin
Genesee	Bigelow Creek and tribs	Queens	Shellbank Basin
Greene	Schoharie Reservoir	Rensselaer	Snyders Lake
Greene	Sleepy Hollow Lake	Richmond	Grasmere, Arbutus and Wolfes Lakes
Herkimer	Steele Creek tribs	Saratoga	Dwaas Kill and tribs
Kings	Hendrix Creek	Saratoga	Tribs to Lake Lonely
Lewis	Mill Creek/South Branch and tribs	Saratoga	Lake Lonely
Livingston	Conesus Lake	Saratoga	Schuyler Creek and tribs
Livingston	Jaycox Creek and tribs	Schenectady	Collins Lake
Livingston	Mill Creek and minor tribs		

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity, cont'd.

COUNTY	WATERBODY	COUNTY	WATERBODY
Schoharie	Engleville Pond		
Schoharie	Summit Lake		
St. Lawrence	Black Lake Outlet/Black Lake		
Steuben	Lake Salubria		
Steuben	Smith Pond		
Suffolk	Millers Pond		
Suffolk	Mattituck (Marratooka) Pond		
Suffolk	Tidal tribs to West Moriches Bay		
Suffolk	Canaan Lake		
Suffolk	Lake Ronkonkoma		
Tompkins	Cayuga Lake, Southern End		
Tompkins	Owasco Inlet, Upper, and tribs		
Ulster	Ashokan Reservoir		
Ulster	Esopus Creek, Upper, and minor tribs		
Warren	Lake George		
Warren	Tribs to L. George, Village of L. George		
Warren	Huddle/Finkle Brooks and tribs		
Warren	Indian Brook and tribs		
Warren	Hague Brook and tribs		
Washington	Tribs to L. George, East Shore of Lake George		
Washington	Cossayuna Lake		
Wayne	Port Bay		
Wayne	Marbletown Creek and tribs		
Westchester	Peach Lake		
Westchester	Mamaroneck River, Lower		
Westchester	Mamaroneck River, Upper, and minor tribs		
Westchester	Sheldrake River and tribs		
Westchester	Blind Brook, Lower		
Westchester	Blind Brook, Upper, and tribs		
Westchester	Lake Lincolndale		
Westchester	Lake Meahaugh		
Wyoming	Java Lake		
Wyoming	Silver Lake		

Note: The list above identifies those waters from the final New York State "2008 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy", dated May 26, 2008, that are impaired by silt, sediment or nutrients.

APPENDIX F

LIST OF NYS DEC REGIONAL OFFICES

<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, PO BOX 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD, PO BOX 220 WARRENSBURG, NY 12885-0220 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROAD AVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVE. BUFFALO, NY 14203-2999 TEL. (716) 851-7070

Appendix B

Phasing Diagrams

Refer to the following Contract Drawings for phasing diagrams of the site demolition:

Drawing G.102-A	Phasing Diagrams – Phase I
Drawing G.102-B	Phasing Diagrams – Phase II
Drawing G.102-C	Phasing Diagrams – Phase III
Drawing G.102-D	Phasing Diagrams – Phase IV
Drawing G.102-E	Phasing Diagrams – Phase V

APPENDIX D

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

CONSTRUCTION SITE LOG BOOK

Table of Contents

1. Pre-Construction Meeting Documents
2. Operator's Certification
3. Pre-Construction Site Assessment Form
4. Construction Duration Inspections
 - Directions
 - Monthly Summary Report
 - Maintenance Schedules
 - Modification to the SWPPP
5. Three-Month Status Reports
6. Final Stabilization and Retention of Records
 - Qualified Professional's Certification of Final Stabilization
 - Retention of Records

Properly completing forms such as those contained in Appendix D meet the inspection requirement of NYSDEC SPDES GP for Construction Activities. Completed forms shall be kept on site at all times and made available to authorities upon request.

1. PRE-CONSTRUCTION MEETING DOCUMENTS

Project Name _____

GP-02-01 Permit No. _____ Date of Authorization _____

Name of Operator _____

General Contractor _____

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

Site Assessment and Inspections -

- a. The Operator agrees to have a qualified professional¹ conduct an assessment of the site prior to the commencement of construction and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction. Following the commencement of construction, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.
- b. The Operator shall maintain a record of all inspection reports in this site log book. The site log book shall be maintained on site and be made available to the permitting authorities upon request. Prior to the commencement of construction,² the Operator shall certify in the site log book that the SWPPP, prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. The Operator shall post at the site, in a publicly-accessible location, a summary of the site inspection activities on a monthly basis.
- c. Prior to filing of the Notice of Termination or the end of permit term, the Operator shall have the qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization³ using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed.

¹ "Qualified Professional means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, licensed engineer or someone working under the direction and supervision of a licensed engineer (person must have experience in the principles and practices of erosion and sediment control). Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist.

² "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

³ "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

2. OPERATOR'S CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. Further, I hereby certify that the SWPPP meets all Federal State and local erosion and sediment control requirements. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law. "

Name (please print) _____

Title _____

Date: _____

Address: _____

Phone: _____

Email: _____

3. PRE-CONSTRUCTION SITE ASSESSMENT FORM

Inspector (print name)

Date of Inspection

Qualified Professional (print name)

Qualified Professional Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the following forms is accurate and complete.

NOTE: Provide comments below as necessary

a. Notice of Intent, SWPPP, and Contractors' Certification:

Yes No NA

- Has a Notice of Intent been filed with the NYS Department of Conservation?
- Is the SWPPP on-site? Where? _____
- Is the Plan current? What is the latest revision date? _____
- Have all contractors involved with implementing the erosion and sediment control portions of the SWPPP signed the contractor's certification?

b. Resource Protection

Yes No NA

- Are construction limits clearly flagged or fenced?
- Important trees and associated rooting zones, on-site septic systems absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, etc. have been flagged for protection.
- Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

c. Surface Water Protection

Yes No NA

- Clean stormwater runoff has been diverted from areas to be disturbed.
- Bodies of water located either on site or in the vicinity of the site have been identified and protected.
- Appropriate practices to protect on-site or downstream surface water are installed.

d. Stabilized Construction Entrance

Yes No NA

- A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
- Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
- Sediment tracked onto public streets is removed or cleaned on a regular basis.

e. Perimeter Sediment Controls

Yes No NA

- Silt fence material and installation comply with the standard drawing and specifications.
- Silt fences are installed at appropriate spacing intervals
- Sediment/detention basin was installed as first land disturbing activity.
- Sediment traps and barriers are installed.

4. CONSTRUCTION DURATION INSPECTIONS

These Inspection Forms will be filled out during the entire construction phase of the project.

Inspector (print name)

Date of Inspection

Qualified Professional (print name)

Qualified Professional Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Check one of the following:

- Weekly Inspection or, Rain Event Inspection (greater than 0.5 inches in 24 hour period)
Date of Rain Event _____ Amount of Rain _____ inches

Stage of Construction (% complete) _____ %

On a plan/sketch below that represents the project area, or on an attached site map:

1. Indicate the extent of all disturbed site areas and drainage pathways;
2. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
3. Indicate all areas of the site that have undergone temporary or permanent stabilization;
4. Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

SITE PLAN/SKETCH

General Housekeeping

Yes No NA

- Is there an increase in turbidity that will cause a substantial visible contrast to natural conditions?
- Is there residue from oil and floating substances, visible oil film, or globules or grease?
- Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- Is construction impacting the adjacent property?
- Is dust adequately controlled?

Temporary Stream Crossing

Yes No NA

- Maximum diameter pipes necessary to span creek without dredging are installed.
- Installed non-woven geotextile fabric beneath approaches.
- 20 feet minimum approach length, minimum 6 inch depth of rock, 18 inch maximum fill depth over pipes.
- Installed diversion dike/swale through both approaches 50 feet (max) from top of bank.
- Fill composed of clean shot rock or KTC Class III channel lining.
- Rock clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Excavation Dewatering

Yes No NA

- Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- Clean water from upstream pool is being pumped to the downstream pool.
- Sediment laden water from work area is being discharged to a silt-trapping device.
- Constructed upstream berm with one-foot minimum freeboard.

Vegetative Filter Strips

Yes No NA

- Vegetation is dense and there are no signs of erosion.
- Width of filter strip is per the approved plan.
- Ground slope of filter strip is between 1% and 5%.

Level Spreader

Yes No NA

- Installed per plan.
- Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- Flow sheets out of level spreader without erosion on downstream edge.

Interceptor Dikes and Swales

Yes No NA

- Installed per plan with minimum side slopes 2H:1V or flatter.
- Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- Sediment-laden runoff directed to sediment trapping structure

Sediment Control

Yes No NA

- Sediment control practices are located and installed correctly.
- BMPs are maintained per specifications
- Stockpiles are stabilized and contained.
- De-watering operations prevent direct discharges to sensitive features.
- Construction Schedule—Are clearing and grading operations divided into stages for large areas (i.e. greater than 2 acres), as opposed to mass grading? (NOTE: If staged, erosion control measures may also need to be staged.)

Adverse Impacts or Off-Site Degradation

Yes No NA

- Work is within the limits of the approved plans, including clearing and blasting.
- Adverse impacts – ponds, streams, wetlands and sinkholes are free of sediment from site.
- Off-site degradation - sediment is kept out of roadways, adjacent property, storm sewers, or air (dust).

Stabilized Construction Entrance

Yes No NA

- Stone is clean enough to effectively remove mud from vehicles.
- Installed per standards and specifications?
- Does all traffic use the stabilized entrance to enter and leave site?
- Is adequate drainage provided to prevent ponding at entrance?

Reinforced Silt Fence

Yes No NA

- Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
- Joints constructed by wrapping the two ends together for continuous support.
- Installed steel posts, downstream side of flow, maximum 6 foot intervals with 6 x 6 inch 14 gage wire.
- Fabric buried 6 inches minimum.
- Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation is ___% of design capacity.

Stone Check Dam

Yes No NA

- Channel is without erosion (i.e., flow is not eroding soil underneath or around the structure).
- Check is in good condition (i.e., rocks have not been displaced and no permanent pools behind the structure).
- Sediment accumulation is ___% of design capacity.

Block and Gravel Drop Inlet Protection

Yes No NA

- Installed concrete blocks lengthwise so open ends face outward, not upward.
- Placed wire screen between No. 3 crushed stone and concrete blocks.
- Sediment accumulation ___% of design capacity.

Filter Fabric (Drop) Inlet Protection

Yes No NA

- Installed 2-inch x 4-inch wood frame and wood posts, with maximum 3-foot spacing.
- Filter fabric buried a minimum of 8 inches and secured to frame/posts with staples at max 8-inch spacing.
- Posts 3-foot maximum spacing between posts.
- Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation is ___% of design capacity.

Excavated Drop Inlet Protection

Yes No NA

- Excavated depth is a minimum 1-foot, but no more than 2-foot maximum.
- Gravel supported by hardware cloth to allow drainage and restrict sediment movement.
- Excavated side slopes should be 2:1.

Temporary Sediment Trap

Yes No NA

- Outlet structure is constructed per the approved plan or drawing.
- Geotextile fabric has been placed beneath rock fill.
- Sediment accumulation is ___% of design capacity.

Temporary Sediment Basin

Yes No NA

- Basin and outlet structure constructed per the approved plan.
- Basin side slopes are stabilized with seed/mulch.
- Sediment accumulation is ___% of design capacity
- Drainage structure flushed and basin surface restored upon removal of sediment basin facility.

MAINTENANCE SCHEDULES

Stabilization

Area	Date since last disturbed	Date of next disturbance	Stabilized? (Yes/No)	Stabilized with	Condition

MODIFICATIONS TO THE SWPPP

Modification & Reason:

6. FINAL STABILIZATION AND RETENTION OF RECORDS

Qualified Professional Certification -The Operator shall have the qualified professional perform a final site inspection prior to filing the Notice of Termination of the end of the permit term.

YES NO NA

Final site drainage will prevent erosion, concentrated flows to adjacent properties, uncontrolled overflow, and ponding.

Conveyance systems are stabilized.

Channels and streambanks are seeded at the outlet points.

"I hereby certify that the site has undergone final stabilization. Final Stabilization means that all soil disturbing activities have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures. Further, all temporary erosion and sediment controls (such as silt fence) not specified for permanent erosion control have been removed.

Name of Qualified Professional: _____

Signature: _____

Retention of Records - The Operator shall retain copies of SWPPPs and any reports submitted in conjunction with this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

C. Maintenance of SWPPP and any reports at the construction site - The Operator shall retain a copy of the SWPPP required by this permit at the construction site from the date of initiation of construction activities to the date of final stabilization.

D. Addresses - Except for the submittal of NOIs and NOTs, all written correspondence under this permit directed to NYSDEC, including the submittal of individual permit applications, shall be sent to the address of the appropriate Department Office.

APPENDIX D

**CONTRACTOR CERTIFICATION STATEMENT
THE GANSEVOORT MARINE TRANSFER STATION SITE DEMOLITION
NEW YORK, NEW YORK**

This certification shall be signed by a duly authorized representative of the contractor or subcontractor having the responsibility for the overall operation of the construction activities or an individual having overall responsibility for implementation of the SWPPP.

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

CERTIFICATION SIGNATURE:

Name:	Title:
Company Name:	
Company Address:	
Company Phone Number:	
Signature:	Date:
Name of Trained Contractor Responsible for SWPPP Implementation:	
Title of Trained Contractor Responsible for SWPPP Implementation:	
SWPPP Elements Contractor Responsible for:	

APPENDIX E

OWNER CERTIFICATION STATEMENT
THE GANSEVOORT MARINE TRANSFER STATION SITE DEMOLITION
NEW YORK, NEW YORK

This certification shall be signed by either an officer of the New York City Department of Sanitation having responsibility for the overall operations of the project or a duly authorized representative.

"I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law."

CERTIFICATION SIGNATURE:

Name:	JENNIFER JIGGIN	Title:	DEPUTY COMMISSIONER
Company Name:	DEPT. OF SANITATION		
Signature:	Jennifer Jiggin	Date:	1/10/14



New York State Office of Parks, Recreation and Historic Preservation

Division for Historic Preservation
P.O. Box 189, Waterford, New York 12188-0189
518-237-8643

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

24 July 2013

Ms. Laurie Silberfeld
Hudson River Park Trust
Pier 40, 2nd Floor
353 West Street
New York, NY 10014

Re: CORPS PERMITS, DEC
Gansevoort Peninsula Western Bulkhead Replacement
Manhattan, New York County
13PR03230

Dear Ms. Silberfeld:

The State Historic Preservation Office (SHPO) has reviewed the information submitted for this project. Our review has been in accordance with Section 106 of the National Historic Preservation Act and relevant implementing regulations.

Based on the information provided, SHPO recommends that the planned project will have **No Adverse Effect** on historic properties listed or eligible for listing on the National Register of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) described in the submitted materials. It is not applicable to any other portion of the project property. Should the project design be changed SHPO recommends further consultation with this office.

These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

A review of our library indicates that we never received copies of two reports which would be useful for future such reviews. The first is the 2000 report by Michael Raber. The second is a study of NYC piers done for the former Department of Marine and Aviation by David Gillespie. Any assistance you can provide to help us obtain copies of these reports would be greatly appreciated.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst – Archaeology Unit
Phone: 518-237-8643 x3276; FAX: 518-233-9049
Email: Philip.Perazio@parks.ny.gov

Cc: John Ziedonis, DDC (via email)



New York State Department of Environmental Conservation
 Division of Water
 625 Broadway, 4th Floor
 Albany, New York 12233-3505

(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized
 under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR _____

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

5. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP.
 *Date final stabilization completed (month/year): _____

9b. Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit
 identification number: NYR _____
 (Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator
 obtains coverage under the general permit)

9c. Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction
 stormwater management practices? yes no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed?
 yes no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? yes no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- For post-construction stormwater management practices that are privately owned, the deed of record has been modified to include a deed covenant that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.
- For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, college, university), or government agency or authority, policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? yes no
(If Yes, complete section VI - "MS4 Acceptance" statement)

V. Additional Information/Explanation:
(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:



EXISTING WATERSHED
 AREA = 4.74 ACRES
 CN = 98 (ALL IMPERVIOUS)
 Tc = 6 MINUTES
 Q10-YR = 13.76 CFS
 Q100-YR = 22.53 CFS
 Q100-YR = 42.38 CFS

LEGEND

WATERSHED BOUNDARY LINE

EXISTING IMPERVIOUS AREA

WARNING! IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

LANGAN
 ENGINEERING & ENVIRONMENTAL SERVICES
 21 FRONT ST
 NEW YORK, NY 10001-2277
 P: 212.478.8400 F: 212.478.8444
 WWW.LANGAN.COM

NEW YORK STATE
 PROFESSIONAL ENGINEER
 LICENSE NO. 100331901

Project
**CANSEVOORT MARINE
 TRANSFER STATION
 SITE DEMOLITION**
 2 BLOOMFIELD STREET
 BLOCK 651, LOT 1
 BOROUGH OF MANHATTAN
 NEW YORK COUNTY
 NEW YORK

Drawing Title
**EXISTING
 WATERSHED MAP**

Project No. 100331901	Drawing No. APPENDIX H FIGURE 1
Date 06 JAN 2014	
Scale 1" = 100'	
Drawn By EJM	
Submission Date 08 JAN 2014	



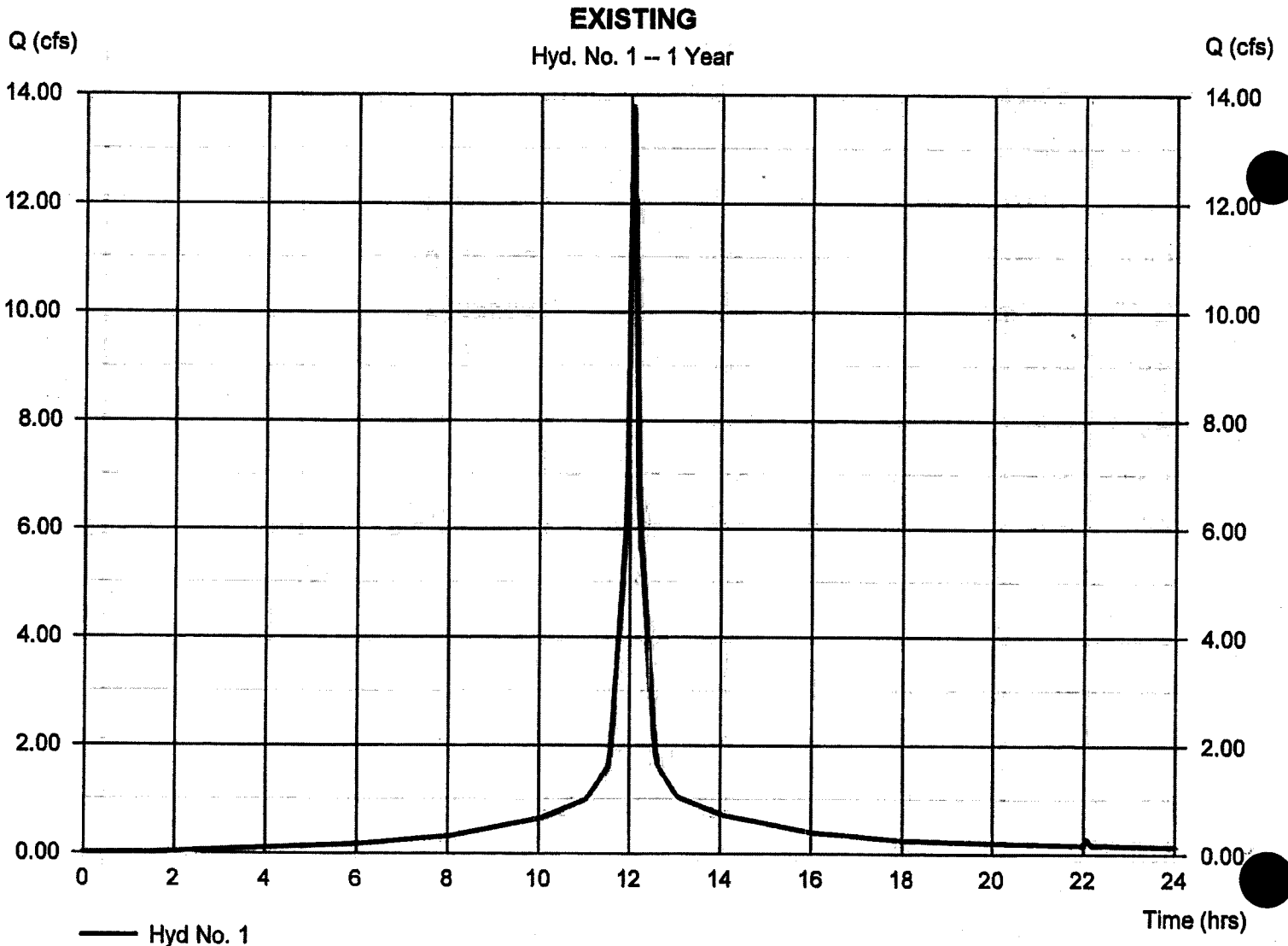
Filename: \\langan\corporate\shared\100331901\cadd\Draw - 100331901\Drawings\Water\Watershed\100331901 - SHEET Appendix H - Figure 1 - Existing Watershed Map.dwg Date: 1/22/14 Time: 10:43 User: mdeluca Style: Title Langan, L.L. Layout: SWAPP APP H - FIG 1 - EXISTING WATERSHED MAP

Hydrograph Report

Hyd. No. 1

EXISTING

Hydrograph type	= SCS Runoff	Peak discharge	= 13.76 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.07 hrs
Time interval	= 1 min	Hyd. volume	= 47,353 cuft
Drainage area	= 4.740 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.90 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

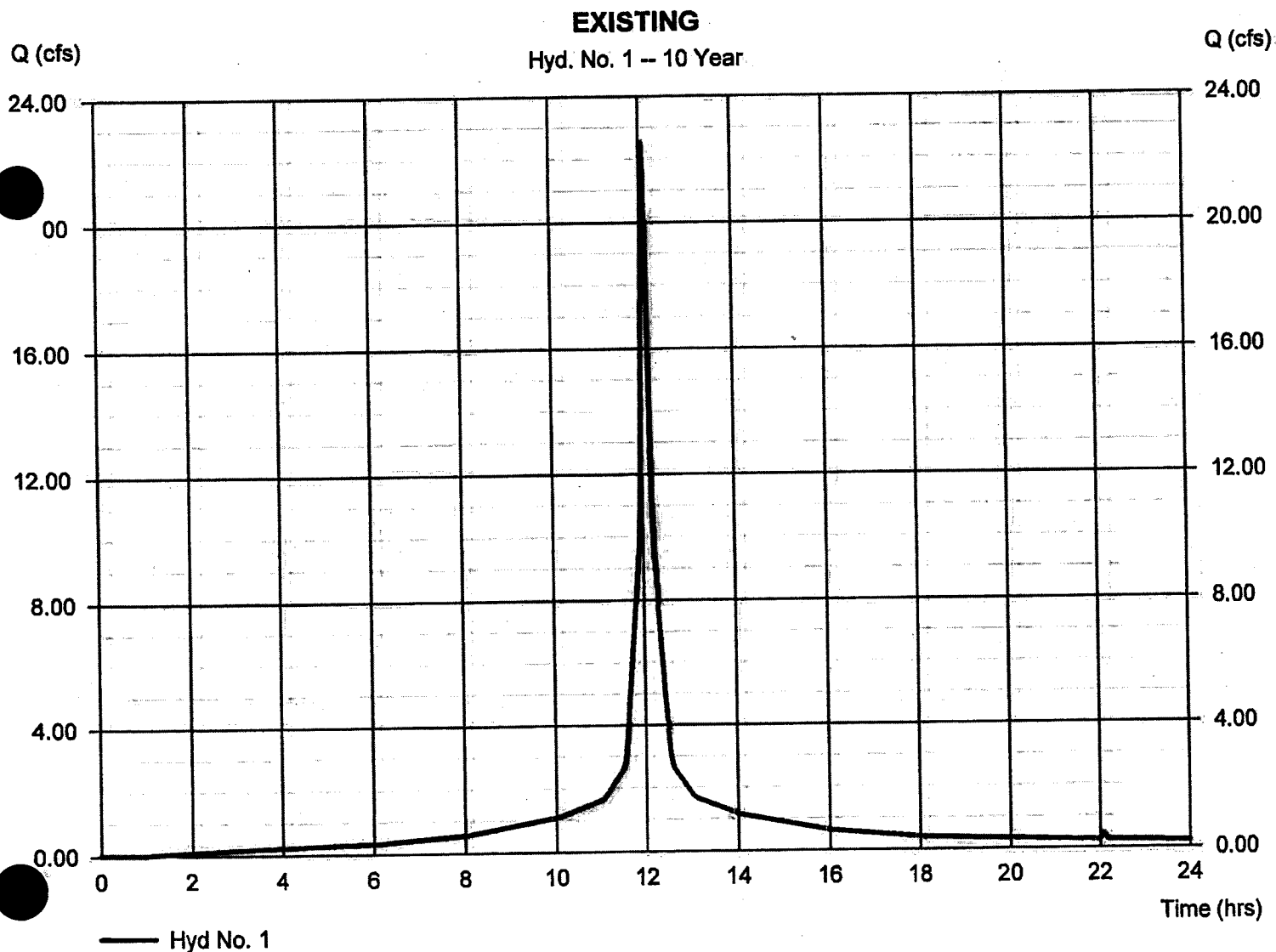
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Tuesday, 09 / 10 / 2013

Hyd. No. 1

EXISTING

Hydrograph type	= SCS Runoff	Peak discharge	= 22.53 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.07 hrs
Time interval	= 1 min	Hyd. volume	= 79,203 cuft
Drainage area	= 4.740 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 4.70 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

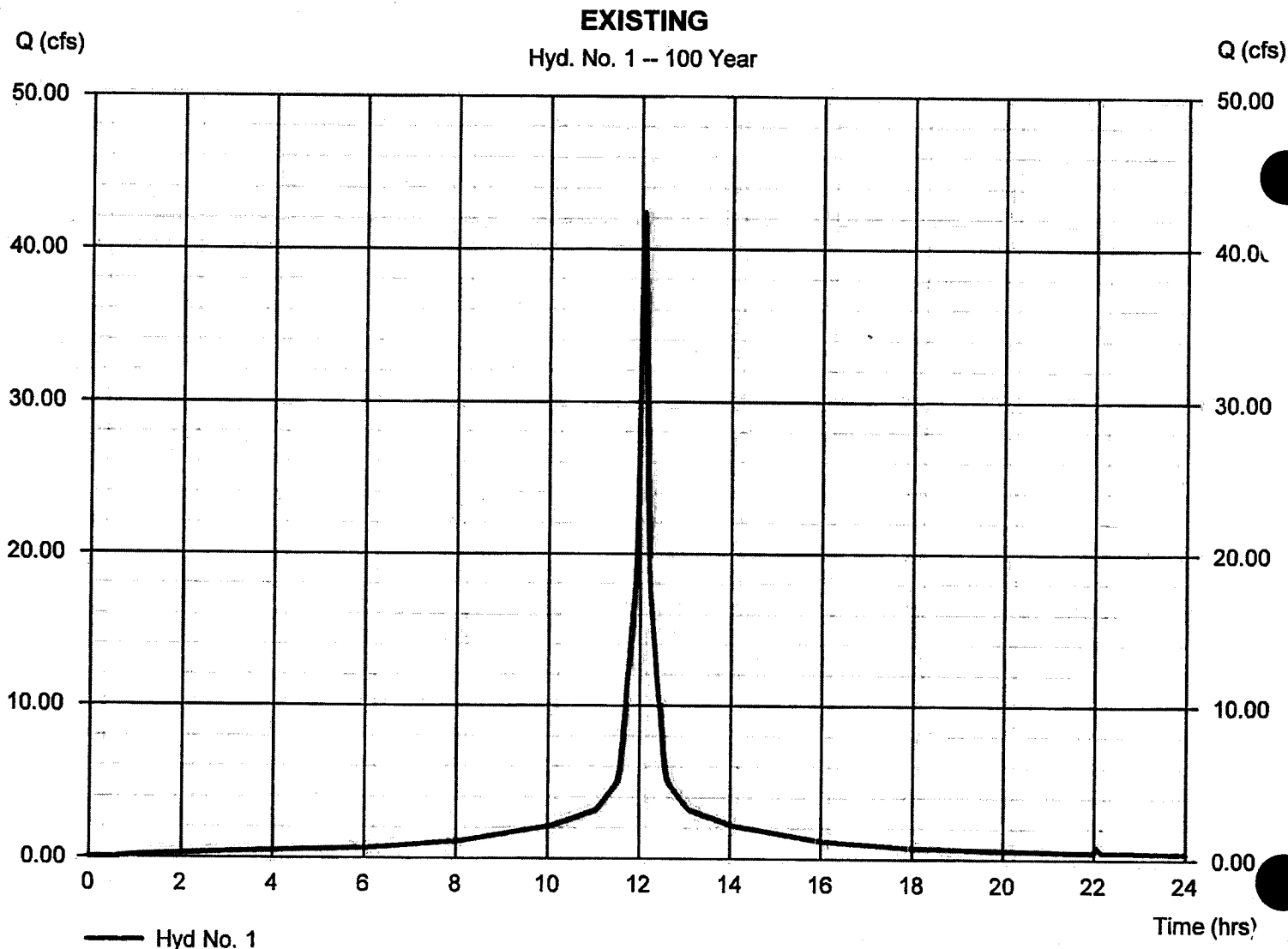
Hydroflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

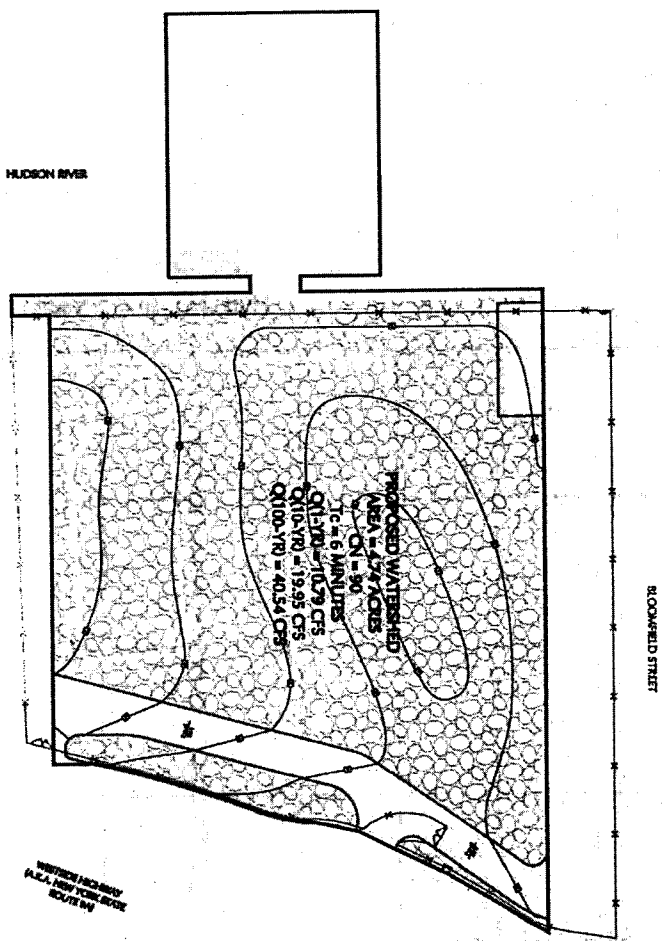
Tuesday, 09 / 10 / 2013

Hyd. No. 1

EXISTING

Hydrograph type	= SCS Runoff	Peak discharge	= 42.38 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 1 min	Hyd. volume	= 151,883 cuft
Drainage area	= 4.740 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 8.80 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484





LEGEND	
	WATERSHED BOUNDARY LINE
	PROPOSED IMPERVIOUS AREA
	PROPOSED CRUSHED STONE AND SAND AREA

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

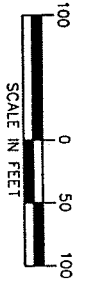
LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES
350 West 31st Street, 6th Floor
New York, NY 10001-2272
P: 212-279-2500 F: 212-279-5444

NEW YORK, FLORIDA, VIRGINIA, CALIFORNIA, CONNECTICUT, AND OTHER STATES
NEW YORK, CALIFORNIA, VIRGINIA, FLORIDA, AND OTHER STATES

Project
CANSEVOORT MARINE
TRANSFER STATION
SITE DEMOLITION
2 BLOOMFIELD STREET
BLOCK 651 LOT 1
BOROUGH OF MANHATTAN
NEW YORK

Drawing Title
PROPOSED
WATERSHED MAP

Project No. 100331901	Drawing No. APPENDIX H FIGURE 2
Date 06 JAN 2014	
Scale 1" = 100'	
Drawn By EMJ	
Submission Date 06 JAN 2014	



Filename: W:\p\cansevoort\100331901\Cadd Data - 100331901\Sheet\fig2.dwg Date: 1/22/14 Time: 11:39 User: gscott Site: TRANSFER STATION Legend: SWPPP App: 1
FIG 2 - PROPOSED WATERSHED MAP

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

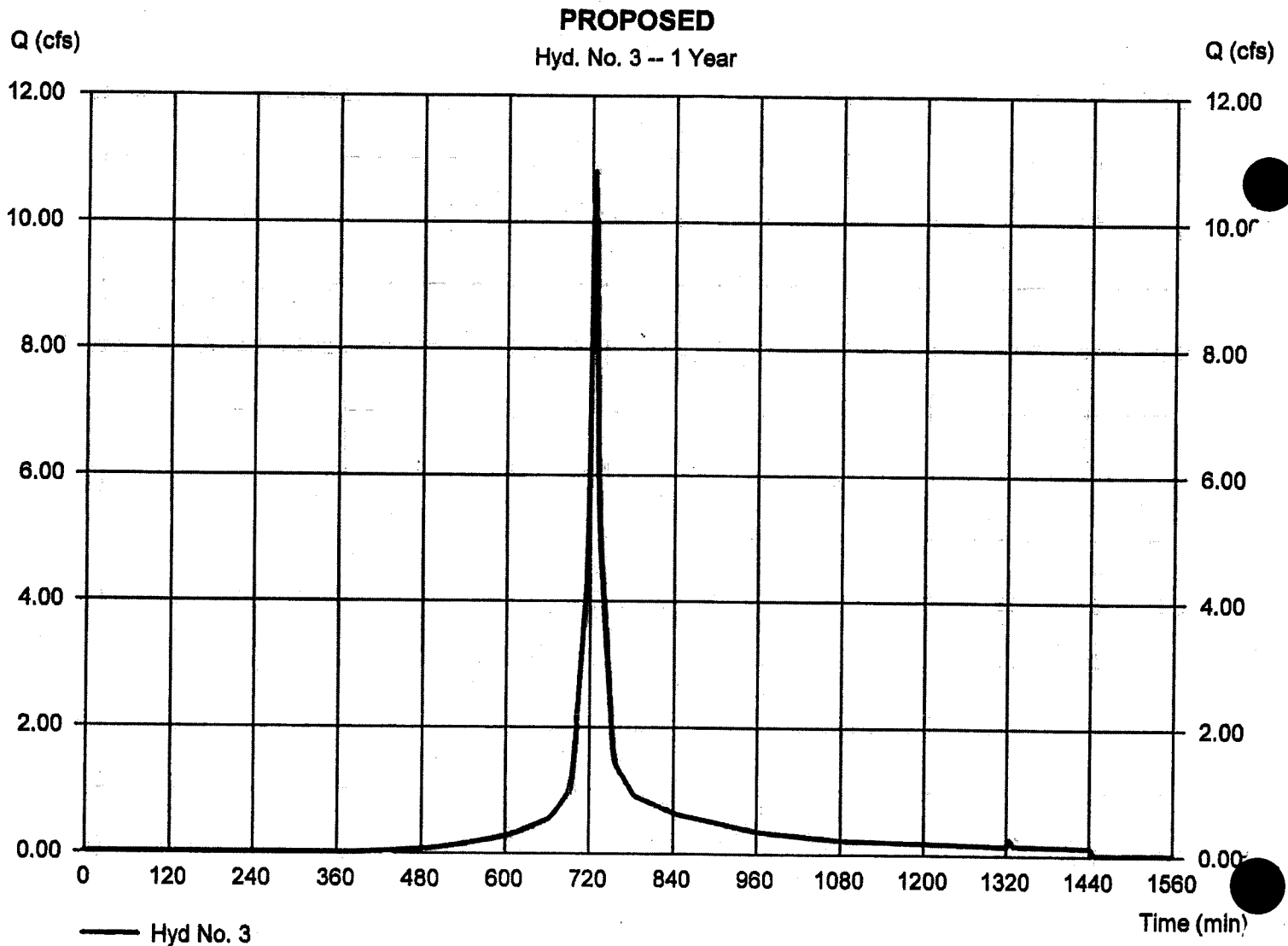
Tuesday, 09 / 10 / 2013

Hyd. No. 3

PROPOSED

Hydrograph type	= SCS Runoff	Peak discharge	= 10.79 cfs
Storm frequency	= 1 yrs	Time to peak	= 725 min
Time interval	= 1 min	Hyd. volume	= 33,580 cuft
Drainage area	= 4.740 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.90 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = $[(1,300 \times 98) + (3,440 \times 87)] / 4,740$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

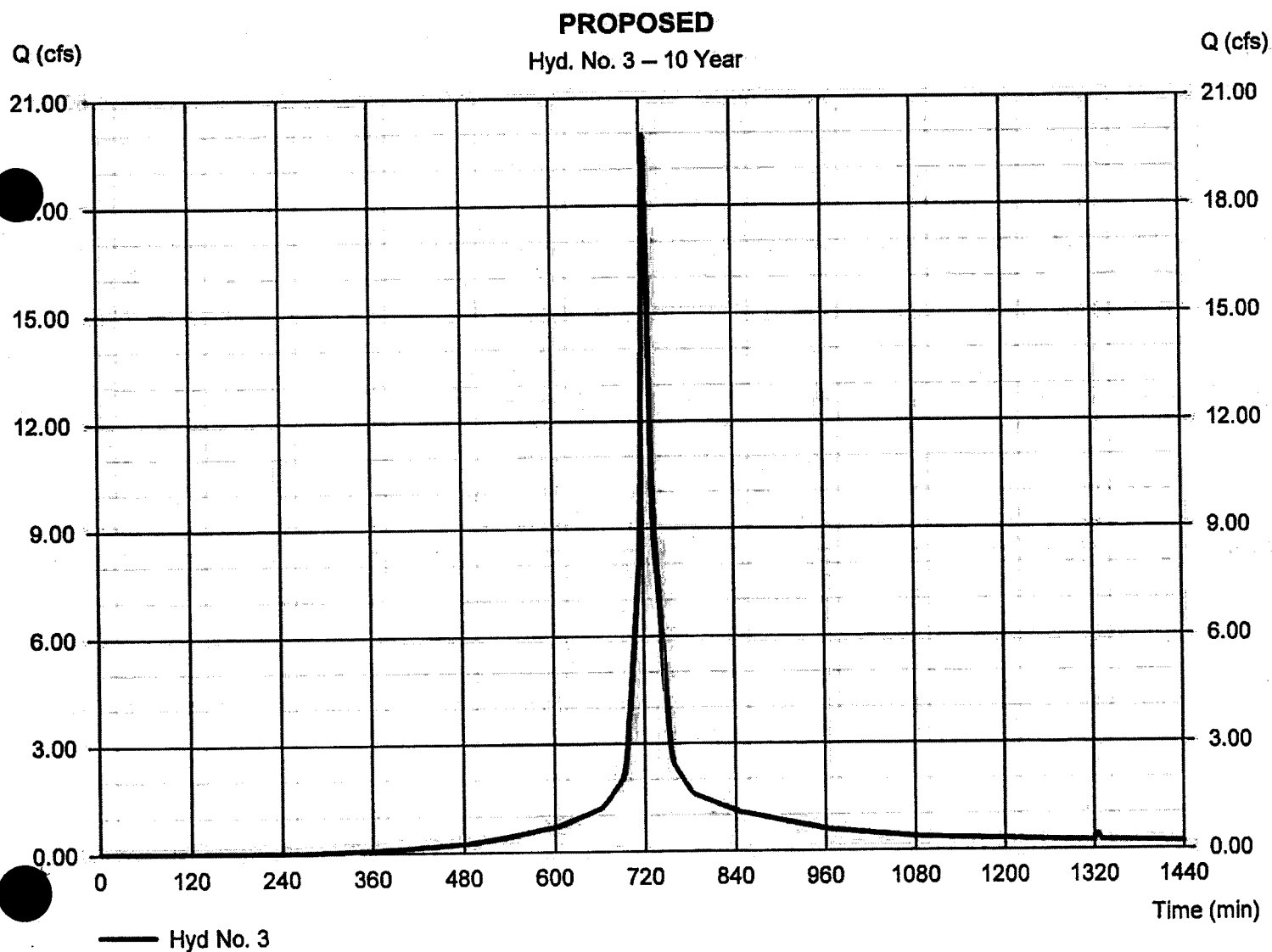
Tuesday, 09 / 10 / 2013

Hyd. No. 3

PROPOSED

Hydrograph type	= SCS Runoff	Peak discharge	= 19.95 cfs
Storm frequency	= 10 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 63,657 cuft
Drainage area	= 4.740 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 4.70 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = $[(1.300 \times 98) + (3.440 \times 87)] / 4.740$



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

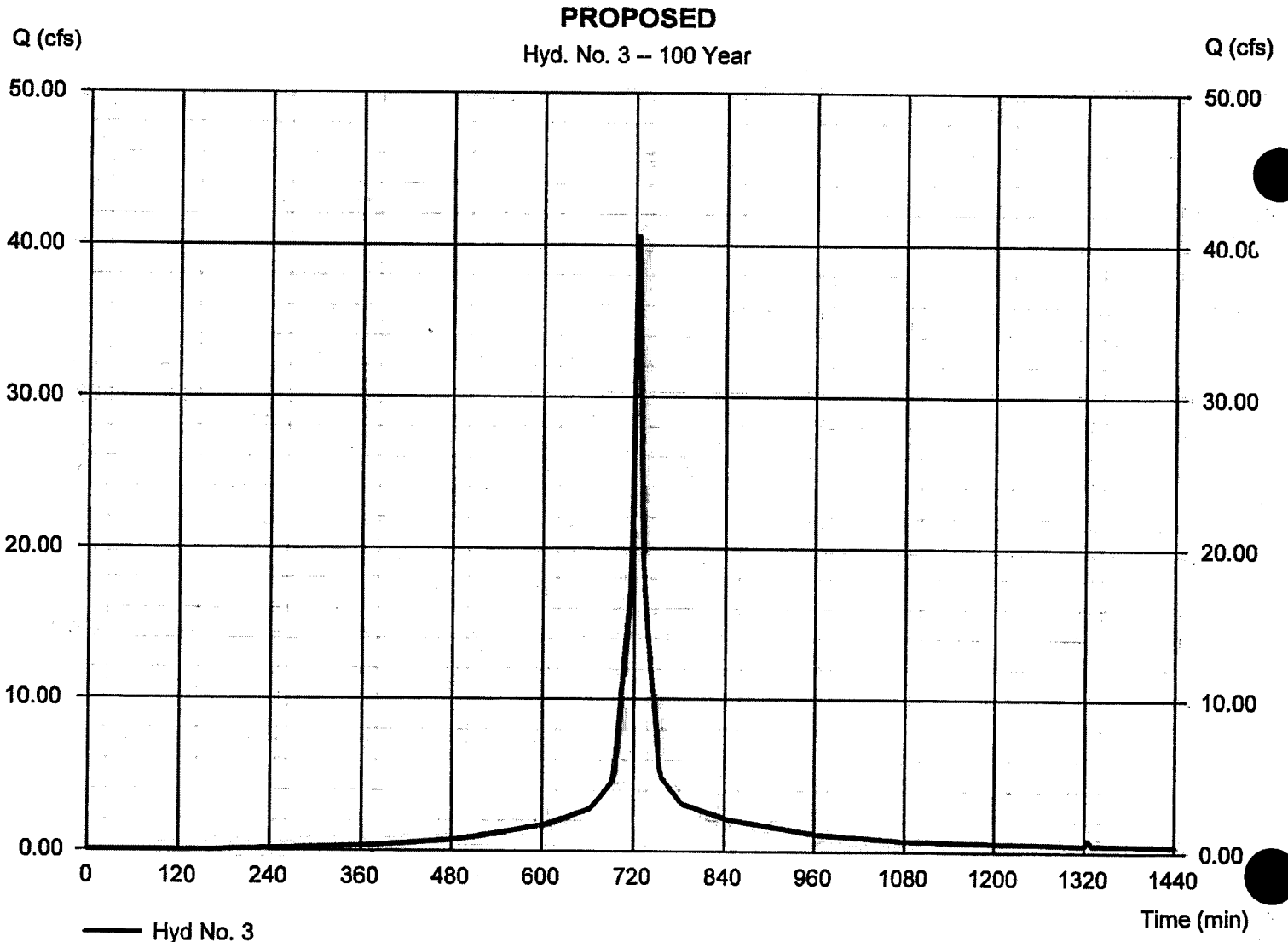
Tuesday, 09 / 10 / 2013

Hyd. No. 3

PROPOSED

Hydrograph type	= SCS Runoff	Peak discharge	= 40.54 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 134,749 cuft
Drainage area	= 4.740 ac	Curve number	= 90*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 8.80 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = $[(1.300 \times 98) + (3.440 \times 87)] / 4.740$



STORMWATER MAINTENANCE PLAN

part of the

STORMWATER POLLUTION PREVENTION PLAN

for


THE GANSEVOORT MARINE TRANSFER STATION SITE DEMOLITION

Prepared For:

New York City Department of Design and Construction
30-30 Thompson Avenue
Long Island City, NY 11101

Prepared By:

Langan Engineering, Environmental,
Surveying and Landscape Architecture, D.P.C.
619 River Drive Center 1
Elmwood Park, New Jersey 07407
NJ Certificate of Authorization No. 24C-07996400


Ronald S. Saito
Ronald S. Saito, P.E.
NY Professional Engineer License No. 90013-1

14 February 2014

Langan Project No. 100331901

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

I. INTRODUCTION

This report was prepared to address the maintenance component of the herein described development to verify the effective, efficient, and enduring service of a particular stormwater measure. This plan contains preventative and corrective maintenance tasks and procedures.

The party responsible for the preventative and corrective maintenance of the stormwater measures described herein is:

Dennis Diggins
Deputy Commissioner of Solid Waste Management
New York City Department of Sanitation
125 Worth Street, Room 726
New York, NY 10013
(646) 885-4684

II. PROJECT DESCRIPTION

The Gansevoort Marine Transfer Station (MTS) site is located at the southwest corner of Manhattan, along West Street (a.k.a. New York State Route 9A); refer to Figure 1 (Site Location Map). The MTS property is approximately 4.7 acres and is identified on the tax maps for the City of New York as Block 651, Lot 1. The MTS site property is bound by Bloomfield Street to the north, West Street (a.k.a. NYS Route 9A) to the east, Gansevoort Street to the south, and the Hudson River to the west.

The Gansevoort MTS property is presently developed with several buildings, a salt storage barn, asphalt parking and driveway areas and the marine transfer station over the Hudson River (refer to the Tectonic boundary and topographic survey drawings in the Contract Documents). The property is currently owned by the Hudson River Park Trust (HRPT) and operated by the City of New York Department of Sanitation (DSNY). The total existing building floor area is approximately 89,000 square feet. Access to the site is provided at both Bloomfield Street and Gansevoort Street intersections with West Street. Slopes are very mild throughout the majority of the property and approximate grades vary from elevation 7 at the center of the property to elevation 2.8 at the southwest corner of the property. In addition, there is a ramp that the DSNY garbage trucks use to gain access to the raised MTS facility on the west side of the property. Grades on this ramp vary from approximate elevation 5 to 23. Elevations are referenced to the Borough of Manhattan Vertical Datum.

III. STORMWATER MAINTENANCE OBJECTIVE

The stormwater system proposed for this development is intended to collect and convey the stormwater from the site. This maintenance plan was prepared to verify the systems in place are operating efficiently and reliably. The responsible party shall verify the long-term/perpetual operation, maintenance, repair, and safety of the stormwater management facilities. In the event

that the stormwater management conveyance system becomes a danger to public safety or public health, or if it is in need of maintenance, the municipality shall so notify the responsible person in writing. If for reasons of safety there is need for immediate action, the responsible person shall act forthwith to remove the danger.

Maintenance procedures are required to maintain the intended operation and safe condition of the stormwater management facility by reducing the occurrence of problems and malfunctions. To be effective, maintenance shall be performed on a regular basis and include such routine procedures as training of staff, periodic inspections, silt and debris removal and disposal, control of mosquitoes and other insects, and review of maintenance and inspection work to identify where the maintenance program could be more effective.

Repair procedures are required to correct a problem or malfunction at a stormwater management facility and to restore the facility's intended operation and safe condition. Based upon the severity of the problem, repairs shall be performed on an as-needed or emergency basis and may include such procedures as structural repairs, mosquito control, removal of debris, sediment and trash which threaten discharge capacity, erosion repair, snow and ice removal and restoration of vegetation.

In the event that the stormwater management conveyance system becomes a danger to public safety or public health, or if it is in need of maintenance, the municipality may notify the responsible person in writing. Upon receipt of that notice, the responsible person shall have fourteen (14) days to initiate maintenance and repair of the system in a manner that is approved by the municipal engineer or his designee. If the responsible person fails or refuses to perform such maintenance and repair, the municipality may immediately proceed to do so and shall bill the cost thereof to the responsible person.

IV. MAINTENANCE OF CONVEYANCE SYSTEMS

The existing conveyance systems (to remain) have adequate access for inspection and/or maintenance. The use of the conveyance systems is necessary to manage runoff and is consistent with the community's surroundings for this area.

All conveyance systems including inlets, manholes and pipes are expected to receive and/or accumulate debris and sediment. These systems must be inspected for clogging and excessive debris and sediment accumulation at least annually as well as after every storm exceeding 2 inches of rainfall. Sediment removal should take place when all runoff has drained from the conveyance network and the systems are reasonably dry. Disposal of debris, trash, sediment, and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state, and federal waste regulations.

All structural components must be inspected for cracking, subsidence, breaching, wearing, and deterioration at least annually. The condition of surrounding and above lying materials shall be inspected for evidence of potential failures or deterioration.

Maintenance of the conveyance system would require a minimum of two people. The routine equipment expected to be utilized for the maintenance tasks may include a jet vacuum vehicle, shovels, lighting equipment and a wheel barrel or truck for the hauling off of debris. Water, mosquito control chemicals, and concrete repair materials may also be required depending on the condition of the structure.

Related inspection forms for this work are located at the end of this appendix.

W:\angan.com\data\EP\data9\100331901\Office Data\Reports\SWPPP\Appendices\Appendix I (Stormwater Maintenance Plan)\2 - 100331901 - SWPPP - Appendix I - Stormwater Maintenance Plan.doc

MAINTENANCE INSPECTION CHECKLIST FOR CONVEYANCE SYSTEMS

**GANSERVOORT MTS SITE DEMOLITION
NEW YORK, NEW YORK**

**NOTE: INSPECTIONS TO BE EVALUATED DURING A
PERIOD OF DRY AND WARM WEATHER AND LOW TIDE
CONDITIONS AT THE PROJECT SITE**

Yes	No	Maintenance Evaluation	Action(s) Required if Answer "Yes"
<input type="checkbox"/>	<input type="checkbox"/>	Is there a buildup of sediment (in excess of 2 inches), trash, debris or any other stormwater pollution?	Remove sediment and evaluate on-site upstream systems. Dispose debris in accordance with local, state and federal requirements.
<input type="checkbox"/>	<input type="checkbox"/>	Is there standing water?	Evaluate downstream systems for clogging or trash sediment buildup.
<input type="checkbox"/>	<input type="checkbox"/>	Is there any structural failure?	Consult engineer to determine safety and/or stability of the system.
<input type="checkbox"/>	<input type="checkbox"/>	Are there visible signs of cracking, subsidence, erosion or deterioration of any of the storm conveyance systems?	Consult engineer to determine safety and/or stability of the system.
<input type="checkbox"/>	<input type="checkbox"/>	Are there any root intrusions or any other vegetation within catch basins, outlet control structures or storm manholes?	Remove roots and dispose vegetation in accordance with local, state and federal requirements.
<input type="checkbox"/>	<input type="checkbox"/>	Are ladder rungs in manholes or outlet structures damaged, missing or misaligned?	Repair or replace.
<input type="checkbox"/>	<input type="checkbox"/>	Are and covers or grates missing, damaged or only partially in place at any catch basin, outlet control structure or manhole?	Repair or replace.

**MAINTENANCE LOG
FOR CONVEYANCE SYSTEMS**

**GANSEVOORT MTS SITE DEMOLITION
NEW YORK, NEW YORK**

**INSTRUCTIONS:
THIS LOG SHALL BE UPDATED TO INCLUDE ALL MAINTENANCE
PERFORMED AT A SPECIFIC STORMWATER MEASURE.**

\\wangen.com\data\EP\data\91100331901\Office Data\Reports\SWPPP\Appendices\Appendix I
(Stormwater Maintenance Plan)\4 - 100331901 - SWPPP - Appendix I - Stormwater Maintenance Log
Conveyance Table.doc

DATE	PERSON CONDUCTING MAINTENANCE	AREA OF MAINTENANCE	PROBLEM(S) FOUND	ACTION(S) TAKEN



New York State Department of Environmental Conservation
Division of Environmental Permits, Region 2
47-40 21ST Street, Long Island City, NY 11101-5407
Phone: (718) 482-4997 \$ FAX: (718) 482-4975
Website: www.dec.state.ny.us

Joe Martens
Commissioner

January 23, 2014

Mr. Craig Plate
McLAREN ENGINEERING GROUP
100 Snake Hill Road
West Nyack, New York 10994

Re: NYSDEC Permit application #2-6299-00004/00001
HUDSON RIVER PARK – Gansevoort Bulkhead Replacement – Segment 5
ECL Article 25 - Tidal Wetlands
ECL Article 15 - Protection of Waters
6 NYCRR 608 - Water Quality Certification
NOTICE OF INTENT TO MODIFY PERMIT: Fish Work Window

Dear Mr. Plate:

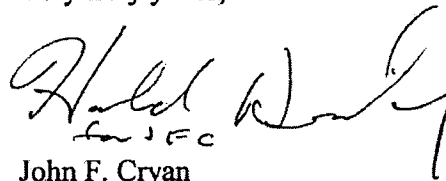
According to 6 NYCRR Part 621.13 (a), **Permit Modifications, suspensions, or revocations by the department** - permits may be modified, suspended or revoked at any time by the Department. Per your recent verbal request regarding clarification/confirmation of Special Condition 3, Work Window, as noted within Notice of Permit Modification letter dated November 12, 2013, for the above referenced permit, the Department intends to modify the permit to reinstate the condition prohibiting installation and removal of pier pilings between November 1st and April 30th of any given year. The work restriction during the established time period protects striped bass habitat during spawning season.

Please note that the effective date for this permit modification, contingent upon administrative appeals, is proposed to be, February 7, 2014 and shall remain in effect for the life of the permit, or until the permit expires on April 22, 2018. As per 6 NYCRR Part 621.(c), Within 15 calendar days of mailing a notice of intent, the permittee may submit a written statement to the regional permit administrator or chief permit administrator, as directed, giving reasons why the permit should not be modified, suspended or revoked, or requesting a hearing, or both. If the permittee has no objection to the modification, no response is required and the department's action will become effective on the date specified in the notice of intent.

All other terms, specifications and conditions of the permit remain as previously written.

Technical questions concerning this matter should be directed to NYSDEC Office of Natural Resources, (718) 482-6464. Administrative questions concerning this matter should be directed to Sandra Reyes-Guerra in the Division of Environmental Permits at (718) 482-4969.

Very truly yours,

A handwritten signature in cursive script, appearing to read "John F. Cryan". Below the signature, the initials "JFC" are written in a smaller, simpler font.

John F. Cryan
Regional Permit Administrator

Cc: Ms. Noreen Doyle, HRPT



New York State Department of Environmental Conservation
Division of Environmental Permits, Region 2
 47-40 21ST Street, Long Island City, NY 11101-5407
 Phone: (718) 482-4997 & FAX: (718) 482-4975
 Website: www.dec.state.ny.us

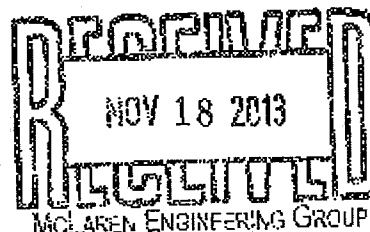
120857.02

Joe Martens
 Commissioner

APP

November 12, 2013

Mr. Craig Plate
McLAREN ENGINEERING GROUP
 100 Snake Hill Road
 West Nyack, New York 10994



Re: NYSDEC Permit application #2-6299-00004/00001
 HUDSON RIVER PARK – Gansevoort Bulkhead Replacement – Segment 5
 ECL Article 25 - Tidal Wetlands
 ECL Article 15 - Protection of Waters
 6 NYCRR 608 - Water Quality Certification
NOTICE OF PERMIT MODIFICATION

Dear Mr. Plate:

The above referenced permit is hereby modified as requested in your letter and Joint Application for Permit submission to J. Cryan, dated September 12, 2013, and received by NYS DEC on September 26, 2013; and as amended in resubmitted documents received by NYS DEC on October 17, 2013. This permit authorizes the reconstruction of the Gansevoort Peninsula Bulkhead between Battery Park and 59th Street, Manhattan, including the installation of a new steel sheet pile bulkhead along the northern 173 feet, and the construction of a new concrete high level platform with steel sheet pile cutoff wall for the southern 257 feet. Sections of the proposed sheet pile will be placed 18" seaward of the existing bulkhead structure.

Based on cut and fill calculations provided with the application for modification, there will be no net fill in waterways resulting from the proposed project. There will be a *net removal* of 188 cubic yards of material from below MHHW.

The following special conditions shall apply to the permit modification:

1. Sheet Reference

Refer to sheets 1-12 of 12, entitled "Gansevoort Bulkhead Replacement," and dated 10/11/2013. Plans were prepared by M.G. McLaren, P.C., West Nyack, NY and were received by NYSDEC October 17, 2013.

2. Calculations Reference

Also refer to cut and fill calculations, summarized in the cover letter and detailed in Appendix B of the request for permit modification, submitted by Craig Plate, P.E. of McLaren Engineering Group. The request was received by NYSDEC on September 26, 2013.

3. Work Window

The condition prohibiting installation and removal of pier pilings between November 1st and April 30th may be removed. Fish windows need not be imposed in the modified permit.

4. Best Management Practices

Best management practices will be employed to prevent the loss of construction materials, debris and sediments from entering the waterways. Such practices may include, but are not limited to construction fencing, staked hay bales, silt fencing, floating platforms, netting, containment booms.

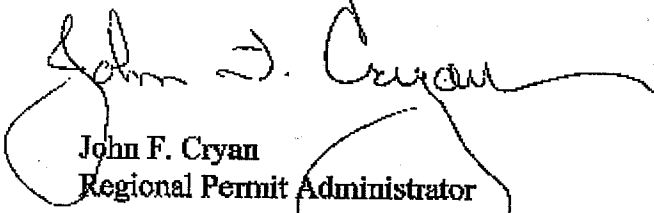
5. Notice of Intent to Commence Work

At least five (5) days prior to the start of work. Permittee must complete and submit the attached Notice of Intent to Commence Work form to the NYSDEC Office of Natural Resources, 47-40 21st Street, Long Island City, New York 11101.

All other terms, specifications and conditions of the permit remain as previously written.

Technical questions concerning this matter should be directed to NYSDEC Office of Natural Resources, (718) 482-6464. Administrative questions concerning this matter should be directed to Sandra Reyes-Guerra in the Division of Environmental Permits at (718) 482-4969.

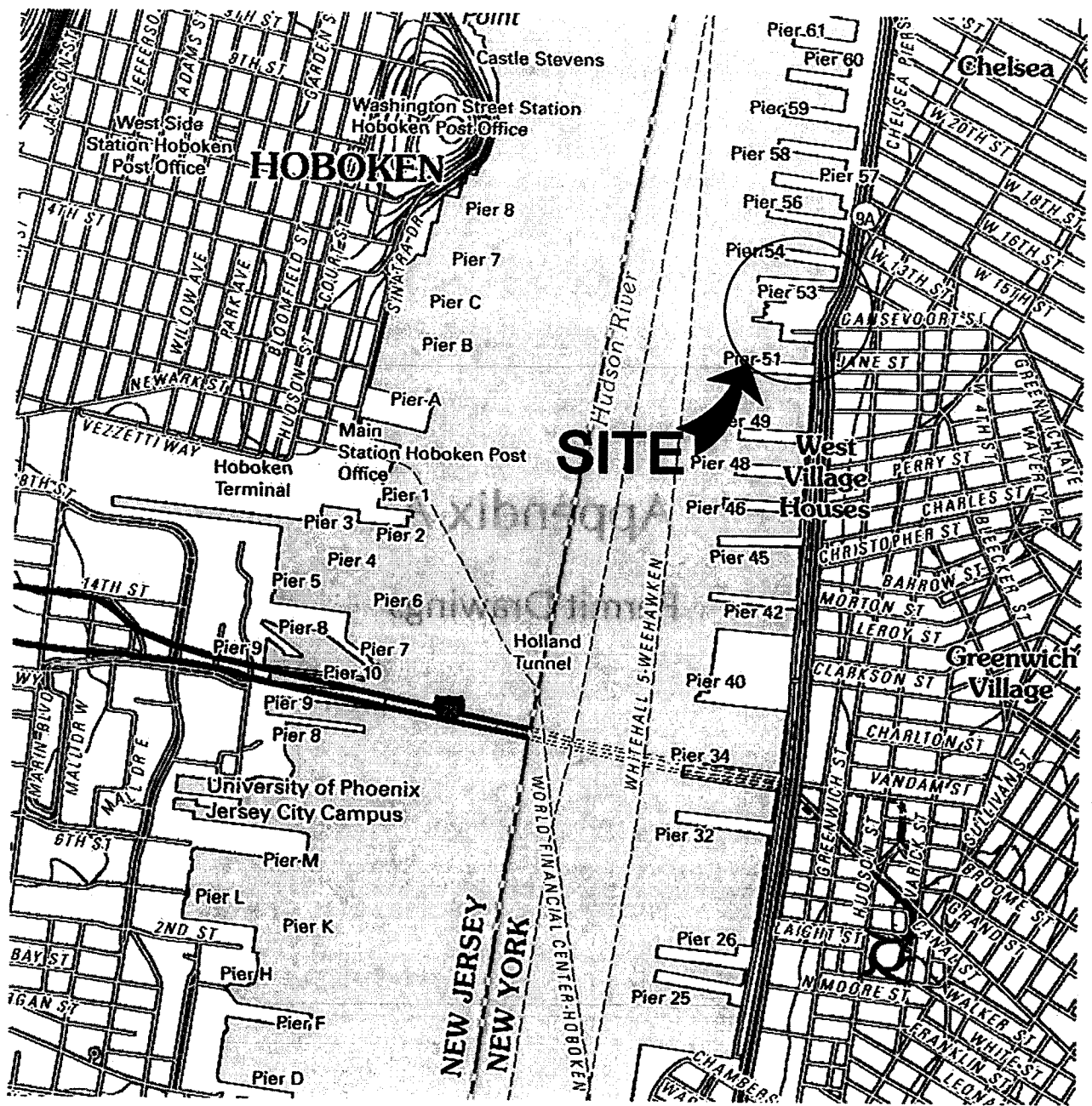
Very truly yours,


John F. Cryan
Regional Permit Administrator

Cc: Ms. Noreen Doyle, HRPT

Appendix A

Permit Drawings



PURPOSE: BULKHEAD RESTORATION

DATUM: MANHATTAN BORO DATUM (MBD)

ADJACENT OWNERS:

1. SEE APPENDIX A
(NOT INCLUDED THIS SUBMISSION)

GANSEVOORT BULKHEAD REPLACEMENT

APPLICANT: NYC DDC
30-30 THOMSON AVENUE
LONG ISLAND CITY, N.Y. 11101

AGENT: M.G. McLAREN, P.C.
100 SNAKE HILL ROAD
WEST NYACK, N.Y. 10994

VICINITY PLAN

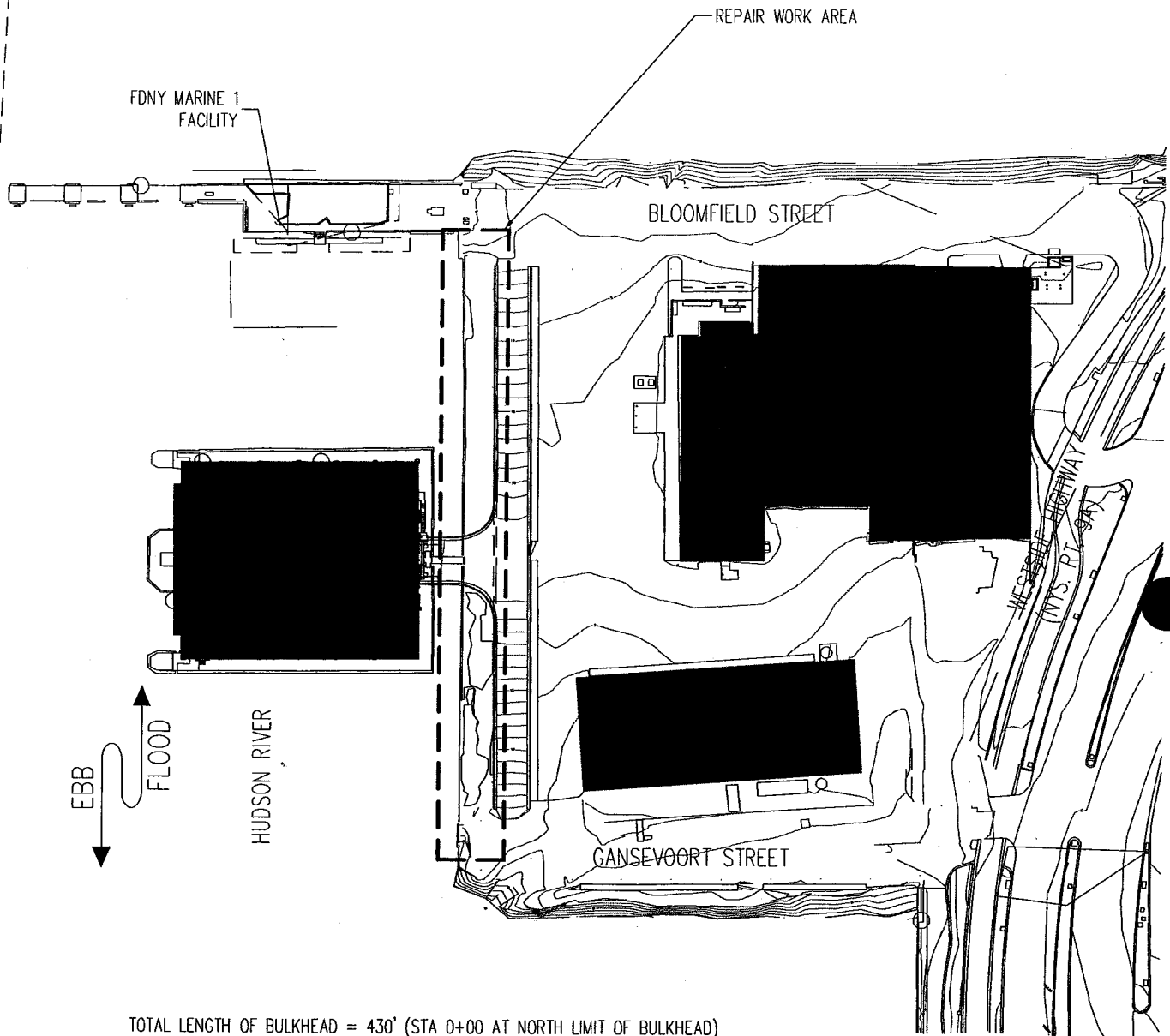
IN: HUDSON RIVER PARK SEGMENT
AT: GANSEVOORT PENINSULA
COUNTY OF: NEW YORK STATE: NY

	REFERENCE DATUM			
	MLLW	NGVD	NAVD88	MBD
HIGHEST OBSERVED (10/30/2012)	14.04	12.37	11.27	9.62
MHHW	5.05	3.38	2.28	0.63
MHW	4.73	3.06	1.96	0.31
MBD	4.42	2.75	1.65	0.00
NAVD88	2.77	1.10	0.00	-1.65
NGVD	1.67	0.00	-1.10	-2.75
MLW	0.20	-1.47	-2.57	-4.22
MLLW	0.00	-1.67	-2.77	-4.42
LOWEST OBSERVED (02/02/1976)	-4.29	-5.96	-7.06	-8.71
NOTE: ALL UNITS IN FEET				
TIDAL BENCHMARKS BASED ON TIDAL STATION AT THE BATTERY, NEW YORK HARBOR. STATION ID: 8518750				

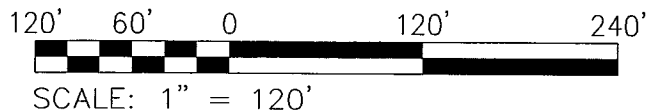
<p>PURPOSE: BULKHEAD RESTORATION DATUM: MANHATTAN BORO DATUM (MBD)</p> <p>ADJACENT OWNERS: 1. SEE APPENDIX A (NOT INCLUDED THIS SUBMISSION)</p>	<p style="text-align: center;">GANSEVOORT BULKHEAD REPLACEMENT</p> <p>APPLICANT: NYC DDC 30-30 THOMSON AVENUE LONG ISLAND CITY, N.Y. 11101</p> <p>AGENT: M.G. McLAREN, P.C. 100 SNAKE HILL ROAD WEST NYACK, N.Y. 10994</p>	<p style="text-align: center;">TIDAL DATA</p> <p>IN: HUDSON RIVER PARK SEGMENT 5 AT: GANSEVOORT PENINSULA COUNTY OF: NEW YORK STATE: NY</p> <p style="text-align: right;">SHT 2 OF 12 08/30/13</p>
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U.S. PIERHEAD LINE PER WATER GRANTS ACT OF 1871



TOTAL LENGTH OF BULKHEAD = 430' (STA 0+00 AT NORTH LIMIT OF BULKHEAD)
 STA 0+00 TO 1+73 - TIMBER CRIBBING WITH CONCRETE SEAWALL
 STA 1+73 TO 4+30 - LOW LEVEL TIMBER PLATFORM WITH CONCRETE SEAWALL



PURPOSE: BULKHEAD RESTORATION

DATUM: MANHATTAN BORO DATUM (MBD)

ADJACENT OWNERS:

1. SEE APPENDIX A (NOT INCLUDED THIS SUBMISSION)

GANSEVOORT BULKHEAD REPLACEMENT

APPLICANT: NYC DDC
30-30 THOMSON AVENUE
LONG ISLAND CITY, N.Y. 11101

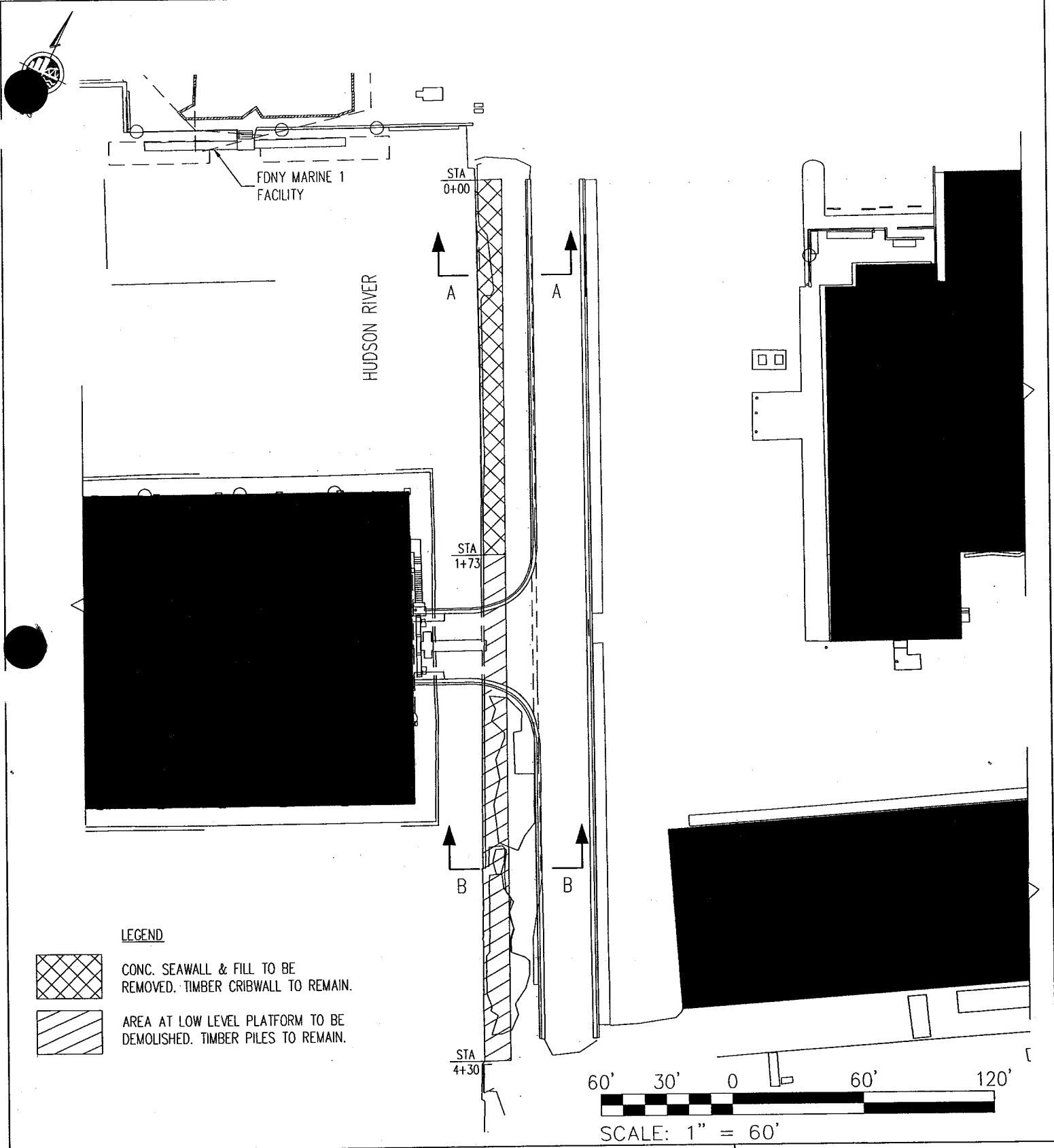
AGENT: M.G. McLAREN, P.C.
100 SNAKE HILL ROAD
WEST NYACK, N.Y. 10994

GENERAL PLAN



IN: HUDSON RIVER PARK SEGMENT
AT: GANSEVOORT PENINSULA
COUNTY OF: NEW YORK STATE: NY

SHT 3 OF 12

08/30/13



LEGEND

-  CONC. SEAWALL & FILL TO BE REMOVED. TIMBER CRIBWALL TO REMAIN.
-  AREA AT LOW LEVEL PLATFORM TO BE DEMOLISHED. TIMBER PILES TO REMAIN.

PURPOSE: BULKHEAD RESTORATION
DATUM: MANHATTAN BORO DATUM (MBD)
ADJACENT OWNERS:
 1. SEE APPENDIX A
 (NOT INCLUDED THIS SUBMISSION)

GANSEVOORT BULKHEAD REPLACEMENT

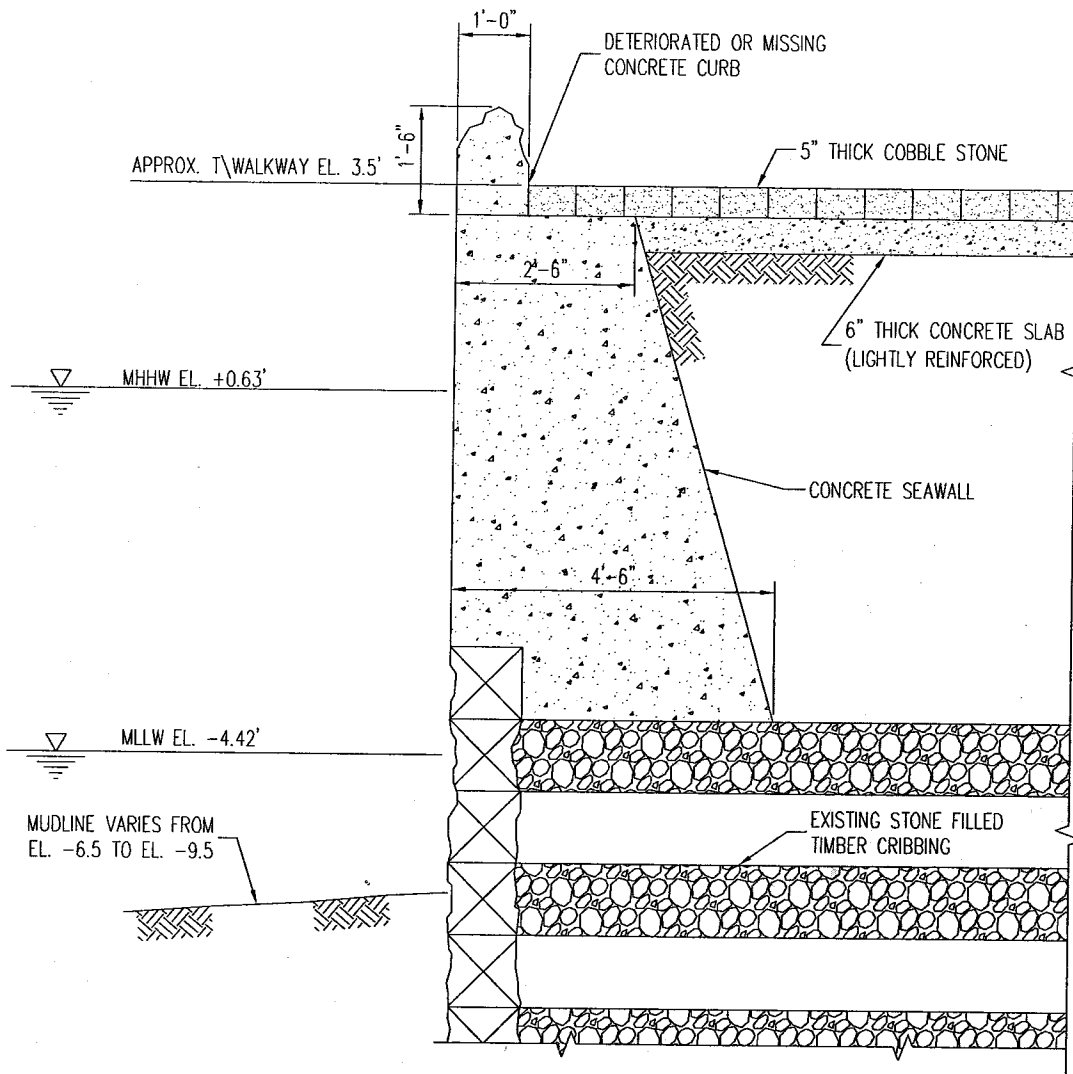
APPLICANT: NYC DDC
 30-30 THOMSON AVENUE
 LONG ISLAND CITY, N.Y. 11101

AGENT: M.G. McLAREN, P.C.
 100 SNAKE HILL ROAD
 WEST NYACK, N.Y. 10994

DEMOLITION PLAN

IN: HUDSON RIVER PARK SEGMENT 5
 AT: GANSEVOORT PENINSULA
 COUNTY OF: NEW YORK STATE: NY

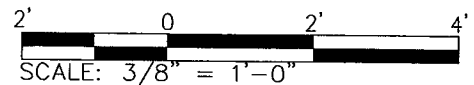
SHT 4 OF 12 08/30/13



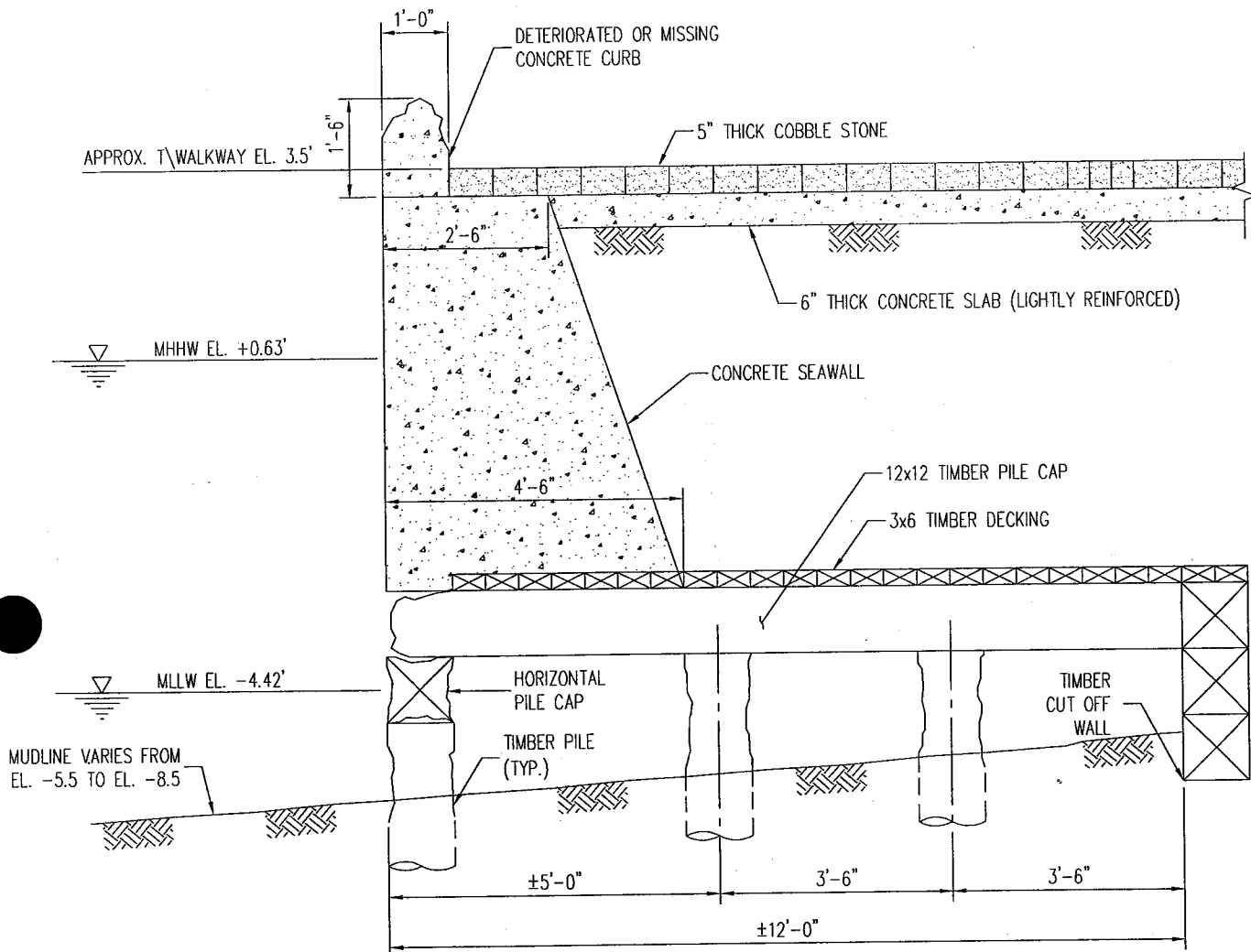
TYP. EXISTING SECTION

(STA. 0+0 TO STA. 1+73)

NOTE:
TYPICAL TIMBER CRIBBING STRUCTURES EXTEND APPROXIMATELY 25-30 FEET
BELOW THE EXISTING MUDLINE.



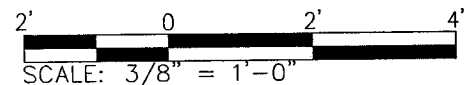
<p>PURPOSE: BULKHEAD RESTORATION DATUM: MANHATTAN BORO DATUM (MBD) ADJACENT OWNERS: 1. SEE APPENDIX A (NOT INCLUDED THIS SUBMISSION)</p>	<p>GANSEVOORT BULKHEAD REPLACEMENT APPLICANT: NYC DDC 30-30 THOMSON AVENUE LONG ISLAND CITY, N.Y. 11101 AGENT: M.G. McLAREN, P.C. 100 SNAKE HILL ROAD WEST NYACK, N.Y. 10994</p>	<p>SECTION A-A IN: HUDSON RIVER PARK SEGMENT AT: GANSEVOORT PENINSULA COUNTY OF: NEW YORK STATE: NY SHT 5 OF 12 08/30/13</p>
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TYP. EXISTING SECTION

(STA. 1+73 TO STA. 4+22)

NOTE: BENTS AT 4'-0" o.c. (TYP.)



PURPOSE: BULKHEAD RESTORATION
 DATUM: MANHATTAN BORO DATUM (MBD)

ADJACENT OWNERS:
 1. SEE APPENDIX A
 (NOT INCLUDED THIS SUBMISSION)

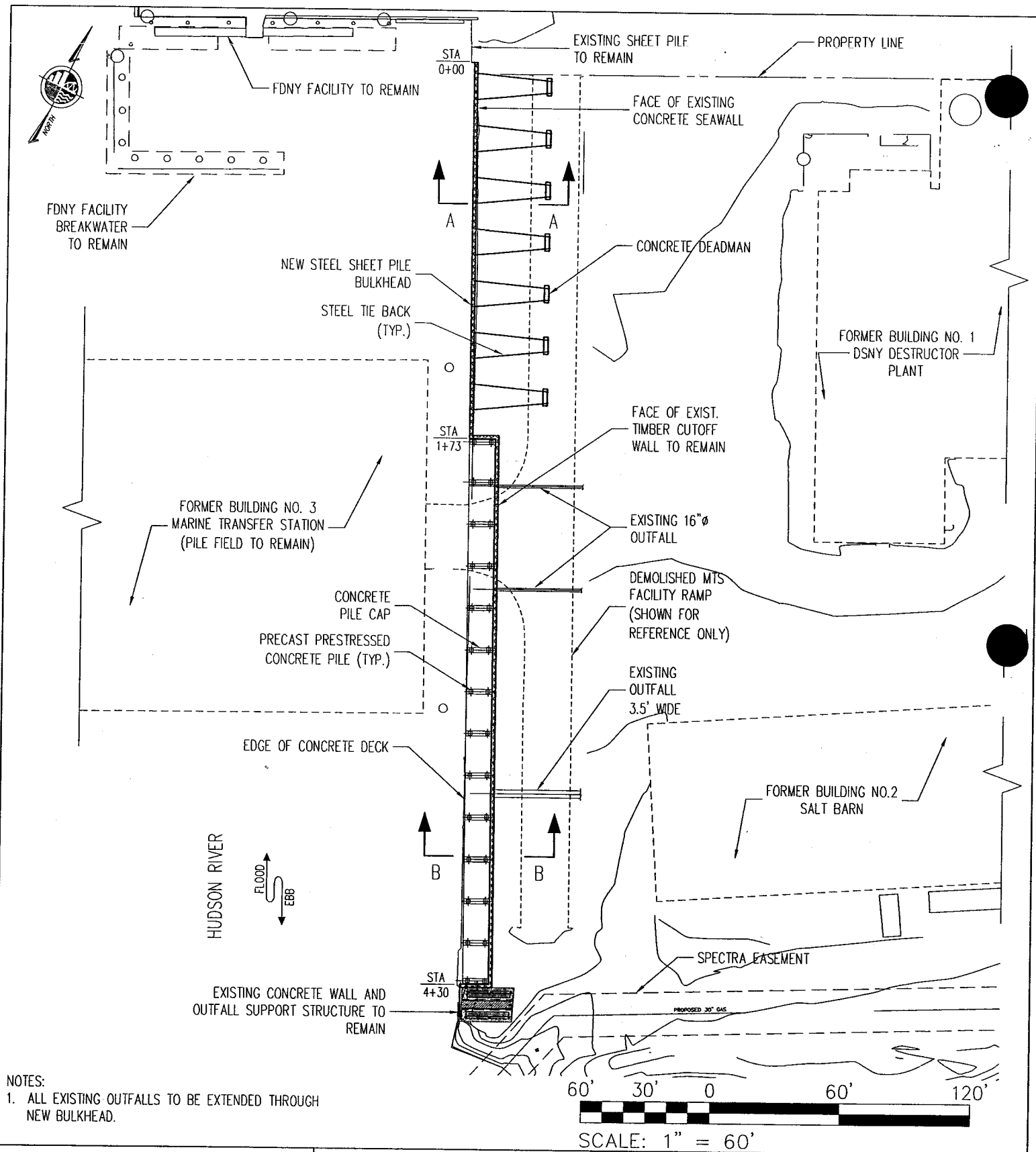
GANSEVOORT BULKHEAD REPLACEMENT
 APPLICANT: NYC DDC
 30-30 THOMSON AVENUE
 LONG ISLAND CITY, N.Y. 11101

AGENT: M.G. McLAREN, P.C.
 100 SNAKE HILL ROAD
 WEST NYACK, N.Y. 10994

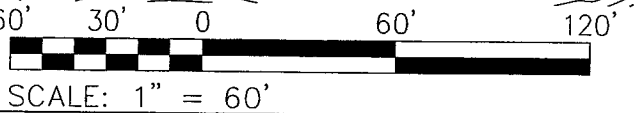
SECTION B-B

IN: HUDSON RIVER PARK SEGMENT 5
 AT: GANSEVOORT PENINSULA
 COUNTY OF: NEW YORK STATE: NY

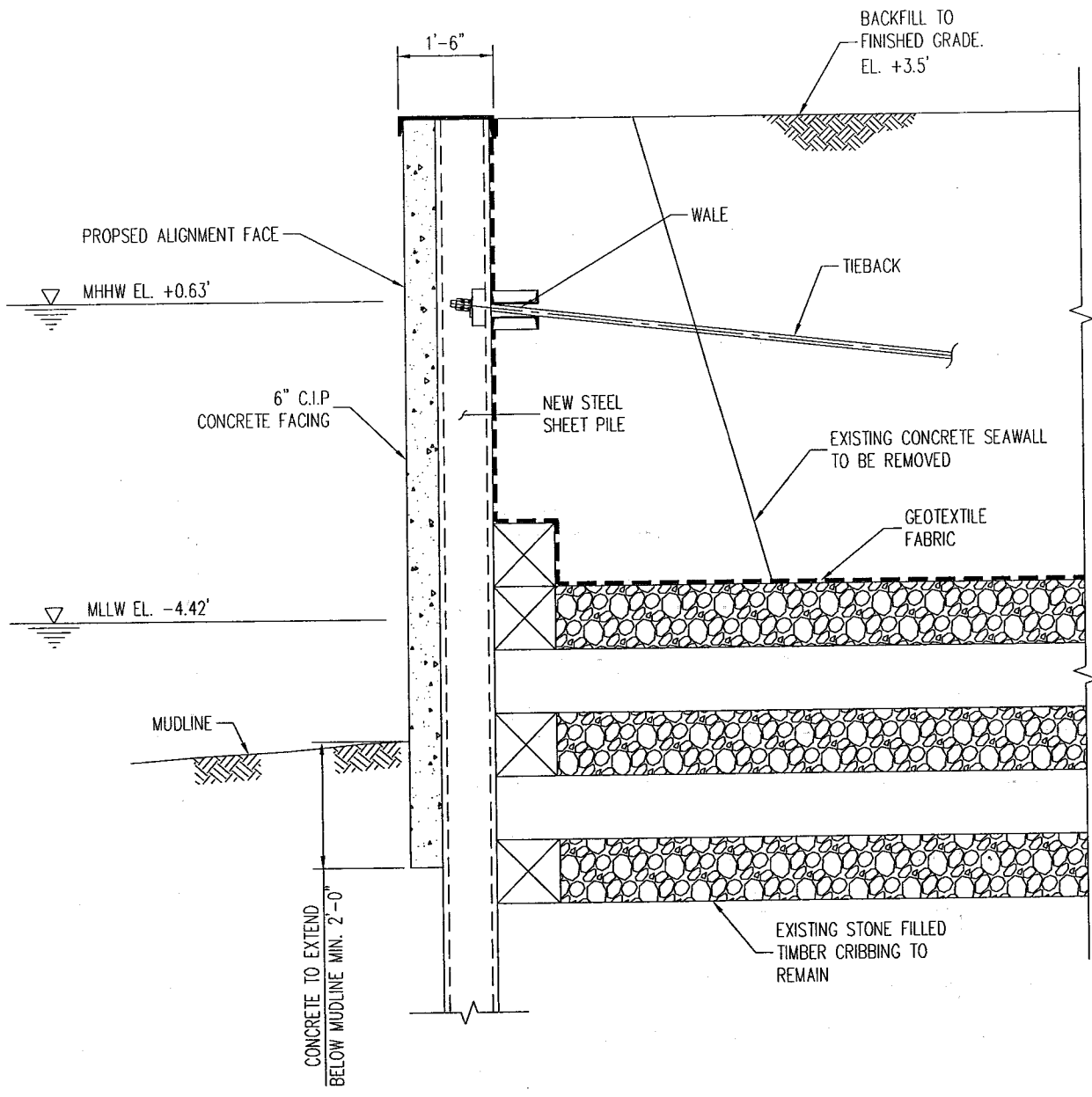
SHT 6 OF 12 08/30/13



NOTES:
 1. ALL EXISTING OUTFALLS TO BE EXTENDED THROUGH NEW BULKHEAD.

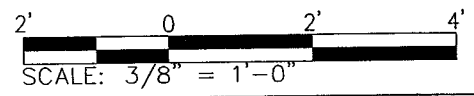


<p>PURPOSE: BULKHEAD RESTORATION DATUM: MANHATTAN BORO DATUM (MBD) ADJACENT OWNERS: 1. SEE APPENDIX A (NOT INCLUDED THIS SUBMISSION)</p>	<p>GANSEVOORT BULKHEAD REPLACEMENT APPLICANT: NYC DDC 30-30 THOMSON AVENUE LONG ISLAND CITY, N.Y. 11101 AGENT: M.G. McLAREN, P.C. 100 SNAKE HILL ROAD WEST NYACK, N.Y. 10994</p>	<p>PROPOSED PLAN IN: HUDSON RIVER PARK SEGMENT AT: GANSEVOORT PENINSULA COUNTY OF: NEW YORK STATE: NY SHT 7 OF 12 08/30/13</p>
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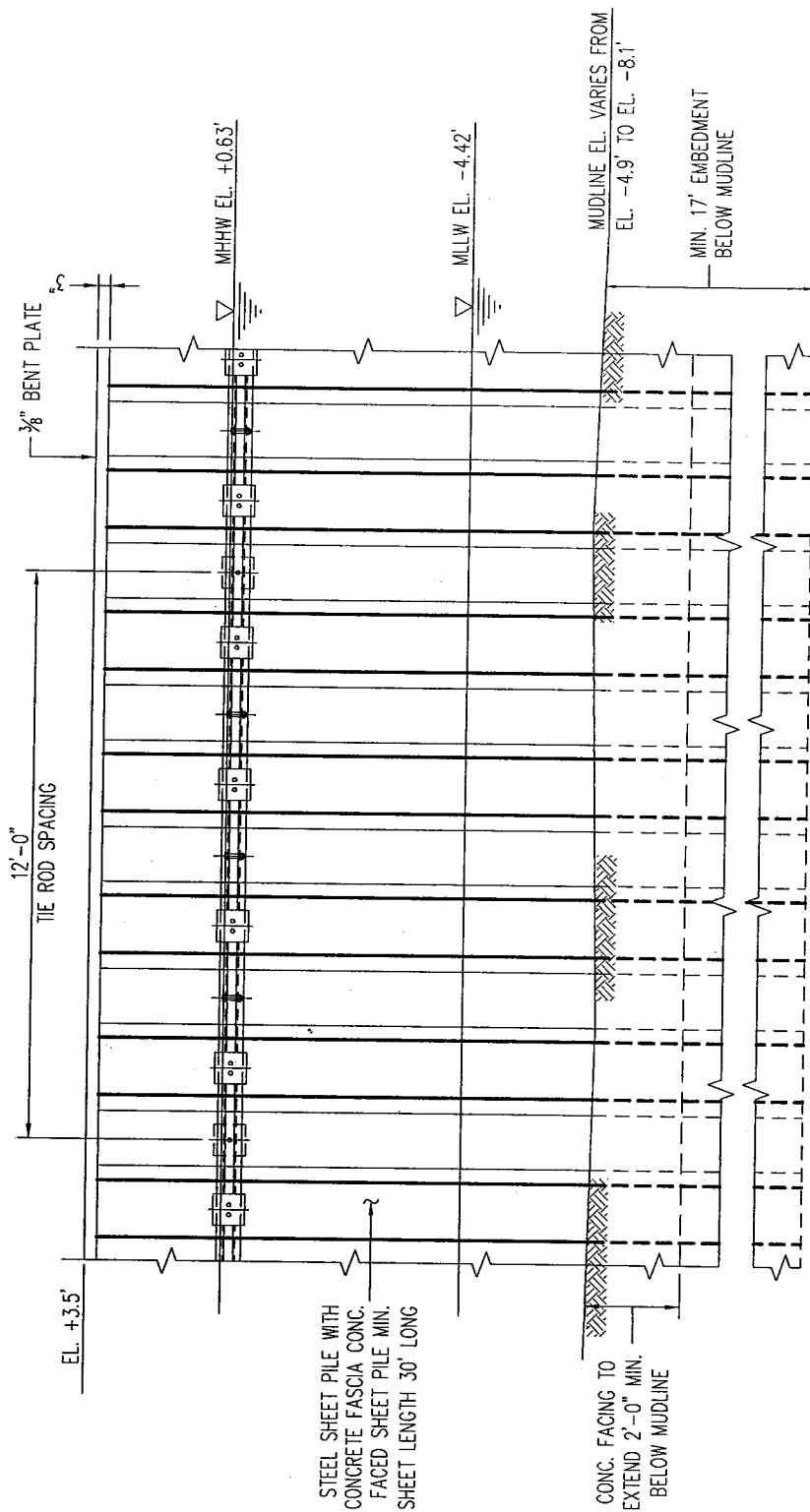


TYP. PROPOSED SECTION

(STA. 0+0 TO STA. 1+73)



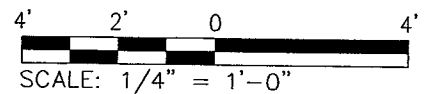
<p>PROJECT PURPOSE: BULKHEAD RESTORATION DATUM: MANHATTAN BORO DATUM (MBD) ADJACENT OWNERS: 1. SEE APPENDIX A (NOT INCLUDED THIS SUBMISSION)</p>	<p>GANSEVOORT BULKHEAD REPLACEMENT APPLICANT: NYC DDC 30-30 THOMSON AVENUE LONG ISLAND CITY, N.Y. 11101 AGENT: M.G. McLAREN, P.C. 100 SNAKE HILL ROAD WEST NYACK, N.Y. 10994</p>	<p>PROPOSED SECTION A-A IN: HUDSON RIVER PARK SEGMENT 5 AT: GANSEVOORT PENINSULA COUNTY OF: NEW YORK STATE: NY SHT 8 OF 12 08/30/13</p>
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PROPOSED SHEET PILE ELEVATION

(STA. 0+00 TO STA. 1+73)

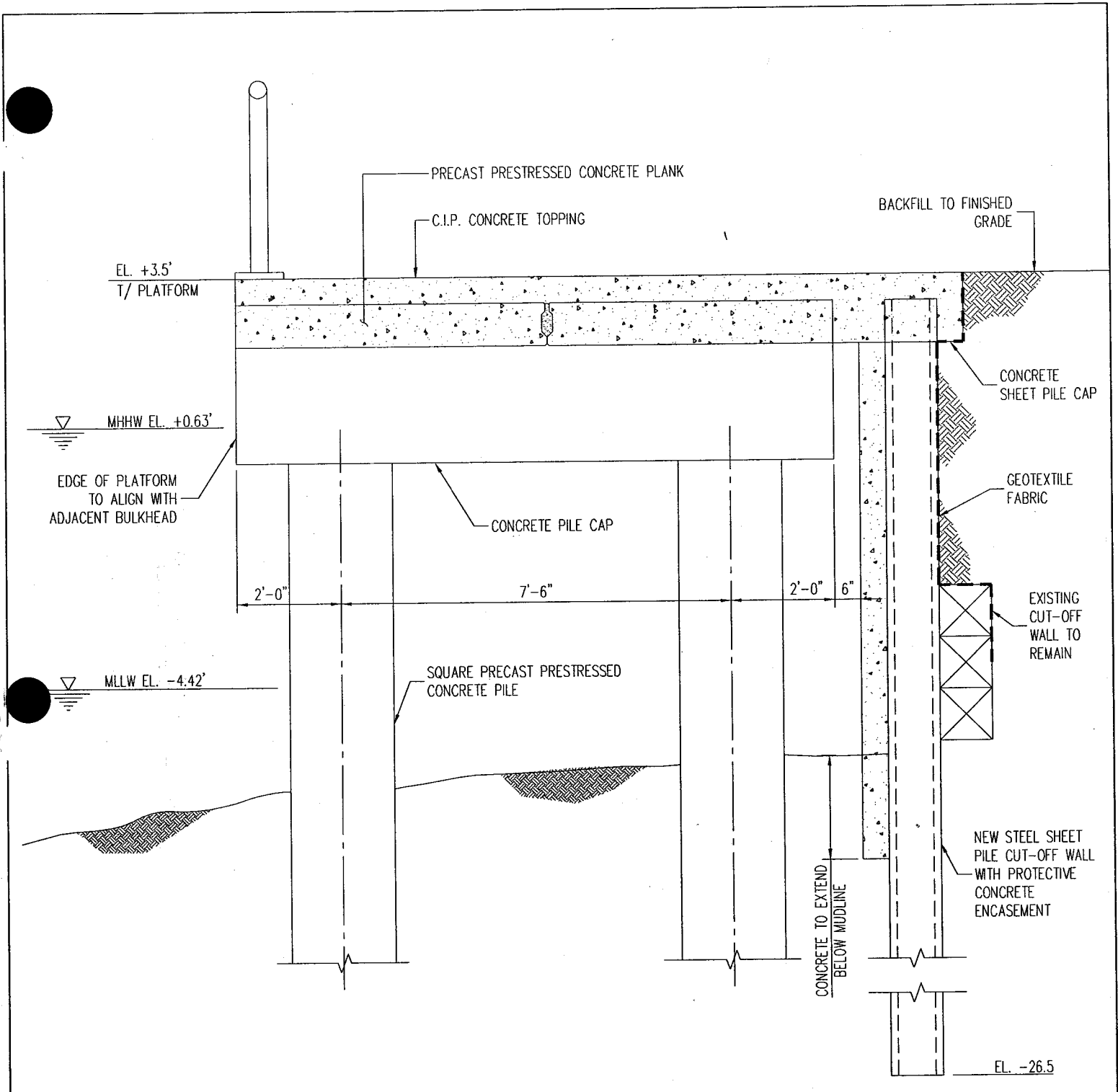
NOTE(S):
1. ELEVATION SHOWS INBOARD SIDE OF BULKHEAD.



PURPOSE: BULKHEAD RESTORATION
 DATUM: MANHATTAN BORO DATUM (MBD)
 ADJACENT OWNERS:
 1. SEE APPENDIX A
 (NOT INCLUDED THIS SUBMISSION)

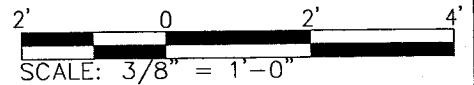
GANSEVOORT BULKHEAD REPLACEMENT
 APPLICANT: NYC DDC
 30-30 THOMSON AVENUE
 LONG ISLAND CITY, N.Y. 11101
 AGENT: M.G. McLAREN, P.C.
 100 SNAKE HILL ROAD
 WEST NYACK, N.Y. 10994

PROPOSED SHEET PILE ELEVATION
 IN: HUDSON RIVER PARK SEGMENT
 AT: GANSEVOORT PENINSULA
 COUNTY OF: NEW YORK STATE: NY

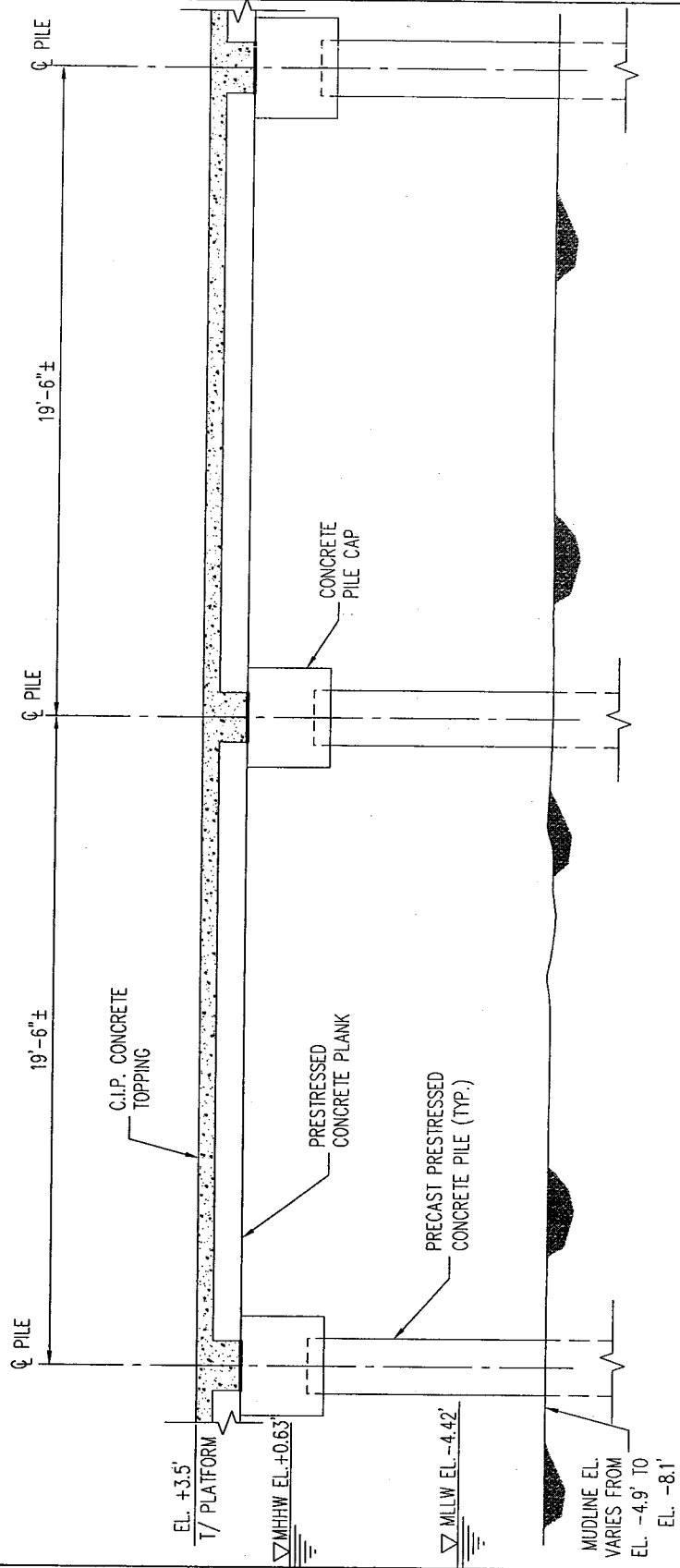


TYPICAL PROPOSED SECTION

(STA. 1+73 TO STA. 4+22)



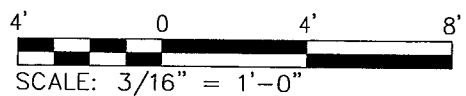
<p>PROJECT PURPOSE: BULKHEAD RESTORATION DATUM: MANHATTAN BORO DATUM (MBD) ADJACENT OWNERS: 1. SEE APPENDIX A (NOT INCLUDED THIS SUBMISSION)</p>	<p>GANSEVOORT BULKHEAD REPLACEMENT APPLICANT: NYC DDC 30-30 THOMSON AVENUE LONG ISLAND CITY, N.Y. 11101 AGENT: M.G. McLAREN, P.C. 100 SNAKE HILL ROAD WEST NYACK, N.Y. 10994</p>	<p>TYPICAL PROPOSED SECTION B-B IN: HUDSON RIVER PARK SEGMENT 5 AT: GANSEVOORT PENINSULA COUNTY OF: NEW YORK STATE: NY SHT 10 OF 12 08/30/13</p>
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TYPICAL PROPOSED ELEVATION

(STA. 1+73 TO STA. 4+22)

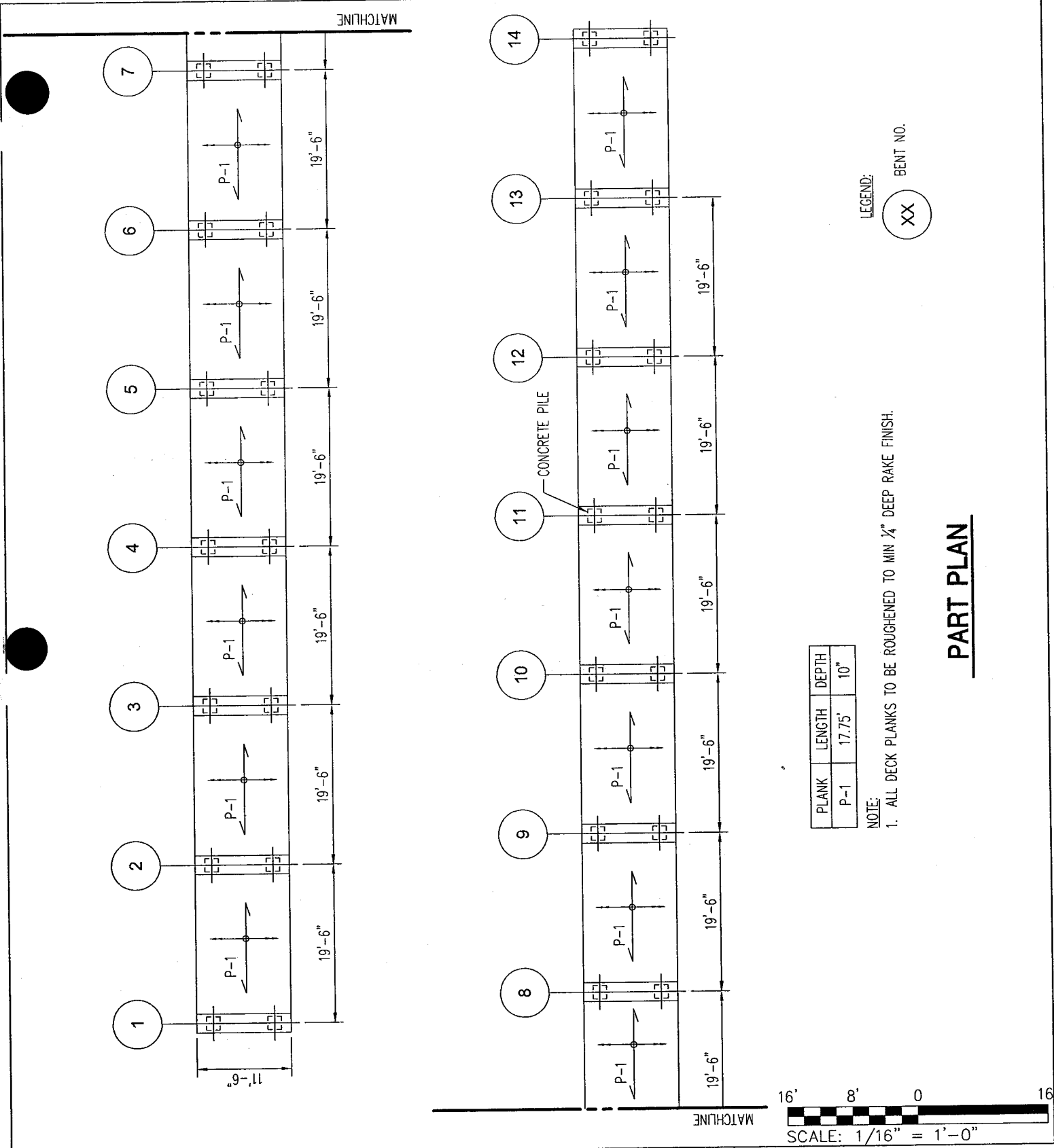
NOTE: SHEET PILE NOT SHOWN FOR CLARITY.



PURPOSE: BULKHEAD RESTORATION
 DATUM: MANHATTAN BORO DATUM (MBD)
 ADJACENT OWNERS:
 1. SEE APPENDIX A
 (NOT INCLUDED THIS SUBMISSION)

GANSEVOORT BULKHEAD REPLACEMENT
 APPLICANT: NYC DDC
 30-30 THOMSON AVENUE
 LONG ISLAND CITY, N.Y. 11101
 AGENT: M.G. McLAREN, P.C.
 100 SNAKE HILL ROAD
 WEST NYACK, N.Y. 10994

TYPICAL PROPOSED ELEVATION
 IN: HUDSON RIVER PARK SEGMENT
 AT: GANSEVOORT PENINSULA
 COUNTY OF: NEW YORK STATE: NY
 SHT 11 OF 12
 08/30/13



PLANK	LENGTH	DEPTH
P-1	17.75'	10"

NOTE:
1. ALL DECK PLANKS TO BE ROUGHENED TO MIN 1/4" DEEP RAKE FINISH.

LEGEND:
XX BENT NO.

PART PLAN

PROJECT PURPOSE: BULKHEAD RESTORATION
 DATUM: MANHATTAN BORO DATUM (MBD)
 ADJACENT OWNERS:
 1. SEE APPENDIX A
 (NOT INCLUDED THIS SUBMISSION)

GANSEVOORT BULKHEAD REPLACEMENT
 APPLICANT: NYC DDC
 30-30 THOMSON AVENUE
 LONG ISLAND CITY, N.Y. 11101
 AGENT: M.G. McLAREN, P.C.
 100 SNAKE HILL ROAD
 WEST NYACK, N.Y. 10994

CONCRETE PLATFORM PART PLAN
 IN: HUDSON RIVER PARK SEGMENT 5
 AT: GANSEVOORT PENINSULA
 COUNTY OF: NEW YORK STATE: NY
 SHT 12 OF 12 08/30/13

Appendix B
Cut / Fill Calculation



JOB: Gansevoort Bulkhead Replacement
 JOB #: 120875.02
 CLIENT: NYCDDC
 CALC BY: RWC DATE: 8/21/2013
 CHK BY: CPP DATE: 9/5/2013

CUT / FILL CALCULATION AT GANSEVOORT BULKHEAD

Volume of Fill from New Steel Sheet Pile Bulkhead

Station	Height (FT)			Depth (FT)	Length (FT)	Total Volume (CF)	Total Volume (CY)
	Mudline El.	MHHW El.	Total				
0+0	-6.9	0.63	7.53	1.5	5	56.48	2.09
0+10	-8.2	0.63	8.83	1.5	10	132.45	4.91
0+20	-7.9	0.63	8.53	1.5	10	127.95	4.74
0+30	-8	0.63	8.63	1.5	10	129.45	4.79
0+40	-8.8	0.63	9.43	1.5	10	141.45	5.24
0+50	-8.2	0.63	8.83	1.5	10	132.45	4.91
0+60	-8.2	0.63	8.83	1.5	10	132.45	4.91
0+70	-9.1	0.63	9.73	1.5	10	145.95	5.41
0+80	-8.5	0.63	9.13	1.5	10	136.95	5.07
0+90	-7.6	0.63	8.23	1.5	10	123.45	4.57
1+00	-7.8	0.63	8.43	1.5	10	126.45	4.68
1+10	-7.8	0.63	8.43	1.5	10	126.45	4.68
1+20	-9.4	0.63	10.03	1.5	10	150.45	5.57
1+30	-8.6	0.63	9.23	1.5	10	138.45	5.13
1+40	-8.3	0.63	8.93	1.5	10	133.95	4.96
1+50	-7.9	0.63	8.53	1.5	10	127.95	4.74
1+60	-7.3	0.63	7.93	1.5	10	118.95	4.41
1+70	-7.6	0.63	8.23	1.5	10	123.45	4.57
1+80	-7.6	0.63	8.23	1.5	10	123.45	4.57
1+90	-7	0.63	7.63	1.5	10	114.45	4.24
2+00	-5.7	0.63	6.33	1.5	10	94.95	3.52
2+10	-2.25	0.63	2.88	1.5	10	43.20	1.60
2+20	-2.25	0.63	2.88	1.5	10	43.20	1.60
2+30	-2.25	0.63	2.88	1.5	10	43.20	1.60
2+40	-6.9	0.63	7.53	1.5	10	112.95	4.18
2+50	-7.3	0.63	7.93	1.5	10	118.95	4.41
2+60	-7.8	0.63	8.43	1.5	10	126.45	4.68
2+70	-8.3	0.63	8.93	1.5	10	133.95	4.96
2+80	-8.6	0.63	9.23	1.5	10	138.45	5.13
2+90	-8.8	0.63	9.43	1.5	10	141.45	5.24
3+00	-9.1	0.63	9.73	1.5	10	145.95	5.41
3+10	-8.3	0.63	8.93	1.5	10	133.95	4.96
3+20	-8.3	0.63	8.93	1.5	10	133.95	4.96
3+30	-7.1	0.63	7.73	1.5	10	115.95	4.29
3+40	-7.3	0.63	7.93	1.5	10	118.95	4.41
3+50	-6.8	0.63	7.43	1.5	10	111.45	4.13
3+60	-6.6	0.63	7.23	1.5	10	108.45	4.02
3+70	-6.4	0.63	7.03	1.5	10	105.45	3.91
3+80	-6.8	0.63	7.43	1.5	10	111.45	4.13
3+90	-6.6	0.63	7.23	1.5	10	108.45	4.02
4+00	-5.1	0.63	5.73	1.5	10	85.95	3.18
4+10	-5.6	0.63	6.23	1.5	10	93.45	3.46
4+20	-4.9	0.63	5.53	1.5	10	82.95	3.07
4+30	-7.9	0.63	8.53	1.5	5	63.98	2.37
Total						5060.10	187.41

Legend

- Height - Distance from mudline to MHHW
- Depth - 18" (12" wide sheet pile plus 6" concrete encasement)
- Length - Distance between stations

Note: All elevations are in Manhattan Borough Datum (FT).



JOB: Gansevoort Bulkhead Replacement
 JOB #: 120875.02
 CLIENT: NYCDDC
 CALC BY: RWC DATE: 8/21/2013
 CHK BY: CPP DATE: 9/5/2013

Volume Calculation at Platform Replacement (Sta. 1+73 to Sta. 4+30)

Volume of Cut from Demolition of Low Level Platform (LLP)

Existing Bottom Deck El.	MHHW EL	Total Height (FT)	Width (FT)	Length (FT)	Total Volume Removed (CF)	Total Volume Removed (CY)
-3	0.63	3.63	12	257	11195	415

Volume of Fill from New High Level Platform

Pile Caps:

Elev. at Bottom of Pile Cap	MHHW EL	Total Height (FT)	Width (FT)	Length (FT)	Each (CF)	QTY	Total Vol (CF)	Total Vol (CY)
0.0	0.63	0.63	3.33	11.5	24.15	14	338.1	12.52

Piles:

Bent	Height (FT)		Total Height (FT)	Width (FT)	Depth (FT)	Each (CF)	QTY	Total Vol (CF)	Total Vol (CY)
	ML El.	Top of Pile El.							
1	-7.6	0.0	7.6	2	2	30.4	2	60.80	2.25
2	-7	0.0	7	2	2	28	2	56.00	2.07
3	-2.25	0.0	2.25	2	2	9	2	18.00	0.67
4	-2.25	0.0	2.25	2	2	9	2	18.00	0.67
5	-7.3	0.0	7.3	2	2	29.2	2	58.40	2.16
6	-8.3	0.0	8.3	2	2	33.2	2	66.40	2.46
7	-8.8	0.0	8.8	2	2	35.2	2	70.40	2.61
8	-8.3	0.0	8.3	2	2	33.2	2	66.40	2.46
9	-7.1	0.0	7.1	2	2	28.4	2	56.80	2.10
10	-6.8	0.0	6.8	2	2	27.2	2	54.40	2.01
11	-6.4	0.0	6.4	2	2	25.6	2	51.20	1.90
12	-6.6	0.0	6.6	2	2	26.4	2	52.80	1.96
13	-5.6	0.0	5.6	2	2	22.4	2	44.80	1.66
14	-7.9	0.0	7.9	2	2	31.6	2	63.20	2.34
Total =								737.60	27.32

Calculation Summary (CY)

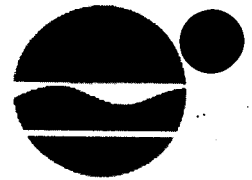
Vol of Fill from SSP Bulkhead	187.4
Vol of Cut from LLP Removal	-414.6
Vol of Fill from New Pile Caps	12.5
Vol of Fill from New Piles	27.3
Total	-187.4

Net Change is 187.4 cubic yards of cut

Appendix C

Existing HRPT Permit

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 2
47-40 21ST Street, Long Island City, NY 11101-5407
Phone: (718) 482-4997 • FAX: (718) 482-4975
Website: www.dec.ny.gov



Joe. Martens
Commissioner

March 28, 2013

Hudson River Park Trust
Pier 40, 2nd Floor
353 West Street
West Houston & West Streets
New York, New York 10014

Re: NYSDEC Permit No. 2-6299-00004/00001
Hudson River Park
ECL Article 25 - Tidal Wetlands
ECL Article 15 - Protection of Waters
6 NYCRR Part 608 - Water Quality Certification
NOTICE OF PERMIT RENEWAL

Dear Ms. Silberfeld:

In response to your request for permit renewal, please be advised that the expiration date of the above referenced permit is hereby extended to April 22, 2018.

All terms, specifications and conditions of the permit remain as previously written.

Technical questions concerning this matter should be directed to Steve Zahn, NYSDEC Marine Resources, 718 482-6464. Administrative questions should be directed to Harold Dickey, NYSDEC Environmental Permits, 718 482-4997.


Very truly yours,


John F. Cryan
Regional Permit Administrator

New York State
Department of Environmental Conservation



The Department of Environmental Conservation (DEC) has issued permit(s) pursuant to the Environmental Conservation Law for work being conducted at this site. For further information regarding the nature and extent of work approved and any Departmental conditions on it, contact the Regional Permit Administrator listed below. Please refer to the permit number shown when contacting the DEC.


Regional Permit Administrator

Permit Number 2-6299-00004/00001

John F. Cryan
47-40 21st Street
LIC, NY 11101
(718) 482-4997

Expiration Date April 22, 2018

NOTE: This notice is NOT a permit

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



PERMIT

Under the Environmental Conservation Law (ECL)

REC PERMIT NUMBER 6299-00004/00001
FACILITY/PROGRAM NUMBER(S)

EFFECTIVE DATE February 5, 1999
EXPIRATION DATE(S) February 1, 2004

TYPE OF PERMIT New Renewal Modification Permit to Construct Permit to Operate

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> Article 15, Title 5: Protection of Waters | <input checked="" type="checkbox"/> GNYCRR 608: Water Quality Certification | <input type="checkbox"/> Article 27, Title 7: GNYCRR 360: Solid Waste Management |
| <input type="checkbox"/> Article 16, Title 15: Water Supply | <input type="checkbox"/> Article 17, Titles 7, 8: SPDES | <input type="checkbox"/> Article 27, Title 9: GNYCRR 373: Hazardous Waste Management |
| <input type="checkbox"/> Article 15, Title 18: Water Transport | <input type="checkbox"/> Article 19: Air Pollution Control | <input type="checkbox"/> Article 34: Coastal Erosion Management |
| <input type="checkbox"/> Article 15, Title 15: Long Island Wells | <input type="checkbox"/> Article 24: Freshwater Wetlands | <input type="checkbox"/> Article 36: Floodplain Management |
| | <input checked="" type="checkbox"/> Article 25: Tidal Wetlands | |

PERMIT ISSUED TO HUDSON RIVER PARK CONSERVANCY		TELEPHONE NUMBER
ADDRESS OF PERMITTEE 141 FIFTH AVENUE		
CONTACT PERSON FOR PERMITTED WORK NOREEN DOYLE, PROJECT MANAGER		TELEPHONE NUMBER 212/353-0366
NAME AND ADDRESS OF PROJECT/FACILITY PROPOSED HUDSON RIVER PARK, WEST SIDE OF MANHATTAN FROM BATTERY PARK TO 59 TH STREET ALONG THE SHORELINE OF HUDSON RIVER.		
LOCATION OF PROJECT/FACILITY SEE ABOVE.		
COUNTY NEW YORK	CITY NEW YORK CITY	WATERCOURSE HUDSON RIVER
NYTM COORDINATES		
DESCRIPTION OF AUTHORIZED ACTIVITY CONSTRUCTION ASSOCIATED WITH A NEW WATERFRONT PARK IN THE LOCATION DESCRIBED ABOVE. PERMITTED ACTIVITIES INCLUDE THE FOLLOWING: REMOVAL AND RECONSTRUCTION OF PIERS INCLUDING ON-PIER FACILITIES; REHABILITATION OF A SEAWALL WITH RELIEVING PLATFORMS AND STRUCTURES PERMITTING ACCESS TO THE WATER; CONSTRUCTION OF BEACH AREAS, BOAT LANDING AND LAUNCHING AREAS, AND A MOORING FIELD.		

By acceptance of this permit, the Permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (see page 2) and any Special Conditions included as part of this permit.

REGIONAL PERMIT ADMINISTRATOR: John J. Ferguson	ADDRESS 47-40 21 Street Long Island City, NY 11101
AUTHORIZED SIGNATURE 	DATE
Page 1 of 4	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee has accepted expressly, by the execution of the application, the full legal responsibility for all damages and costs, direct or indirect, of whatever nature and by whomsoever suffered, for liability it incurs resulting from activity conducted pursuant to this permit or in noncompliance with this permit and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from such activity.

Item B: Permittee to Require its Contractors to Comply with Permit

The permittee shall require its independent contractors, employees, agents and assigns to read, understand and comply with this permit, including all special conditions, and such persons shall be subject to the same sanctions for violations of this permit as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required for this project.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

GENERAL CONDITIONS

General Condition 1: Facility Inspection by the Department

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when written or verbal notification is provided by the Department at least 24 hours prior to such inspection.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

General Condition 2: Relationship of this Permit to Other Department Orders and Determinations

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

General Condition 3: Applications for Permit Renewal or Modifications

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

The permittee must submit a renewal application at least:

- a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES), Hazardous Waste Management Facilities (HWMF), major Air Pollution Control (APC) and Solid Waste Management Facilities (SWMF); and
- b) 30 days before expiration of all other permit types.

Submission of applications for permit renewal or modification are to be submitted to:

NYSDEC Regional Permit Administrator, Region 2
 47-40 21st Street, Long Island, NY 11101 718/482-4997

General Condition 4: Permit Modifications, Suspensions and Revocations by the Department

The Department reserves the right to modify, suspend or revoke this permit when:

- a) the scope of the permitted activity exceeds or a violation of any condition of the permit or provisions of the ECL and pertinent regulations is found;
- b) the permit was obtained by misrepresentation or failure to disclose relevant facts;
- c) new material information is discovered; or
- d) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the permit was issued.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPECIAL CONDITIONS

1. All construction and other authorized activities shall be consistent with the project as described in the following documents:
 - A. *Joint Application Package for Permit* (March 1998) prepared by Empire State Development Corporation (ESDC) in cooperation with Hudson River Park Conservancy (HRPC), stamped by the New York State Department of Environmental Conservation (DEC) Region 2 office on March 27, 1998.
 - B. *Hudson River Park Final Environmental Impact Statement* (May 1998) prepared for ESDC in cooperation with HRPC.
 - C. Working Copy of the *Final Hudson River Park Design Guidelines Master Plan and Appendix* (dated October 16, 1997, with handwritten notes), prepared by the HRPC in cooperation with ESDC and the City of New York (Exhibit 15 of the Issues Conference).
 - D. Letter (and attachments) dated August 31, 1998, from Noreen Doyle of HRPC to Diane Rusanowsky and Michael Ludwig of the National Marine Fisheries Service.
 - E. Letter (and attachments) dated January 14, 1999, from Noreen Doyle of HRPC to James Haggerty of the United States Army Corps of Engineers.
2. Detailed design drawings for each segment of the park depicting construction or modification of platforms, bulkheads, get-downs, and other structures in, on, above, or directly adjacent to the water shall be submitted for Departmental approval at least thirty (30) days prior to the start of work in each segment. No work shall commence in any segment until the detailed design drawings for that segment are approved by the Department.
3. Installation and removal of pier pilings is prohibited between November 1st and April 30th.
4. Dredging is prohibited.
5. Best management practices shall be employed to prevent construction materials, sediment, and debris from entering the water during construction/demolition activities. Such measures may include, but are not limited to, netting, fencing, floating platforms, and booms.
6. New bulkheading shall be installed within 18" of the existing structure. Such dimension shall be measured from seaward face of existing structures to the seaward face of new structures.
7. New bulkheading shall be backfilled only with uncontaminated, inorganic, granular material such as sand, dirt, gravel, and crushed rock. Such backfill shall not include asphalt, slag, ash, concrete, or construction and demolition debris.
8. Excavation and backfilling associated with pile wrapping below the mudline shall be conducted by hand and shall be limited to the minimum amount of material necessary to complete pile wrapping.
9. A. Pumpout facilities shall be provided at Pier 25 and may be provided at another location. Notification shall be provided to DEC at least 30 days in advance of construction. Signs (a minimum of 2 feet by 3 feet in size) containing the following language shall be prominently displayed and maintained throughout the park:

"The discharge of untreated sewage into the waters of the United States and New York State is prohibited by Law. [33 USC 1322; NYS Navigation Law Section 33-c] Boat sewage from holding tanks shall be pumped at onshore facilities. Facilities are located at Pier 25."

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPECIAL CONDITIONS (Continued)

- B. In all rental and lease agreements for slips or docking facilities the Permittee shall include conditions specifying that any vessel with a holding tank shall not dispose its sanitary waste in waters of the State and informing tenants or lessees that vessels with a holding tank will be serviced by the pumpout facilities referenced in Special Condition 9 a) above between May 1st and September 30th during regular business hours.
- 10. All vessels moored for a period of thirty (30) consecutive days or more shall be located in areas with sufficient water depths to ensure that the distance between the lowest point of each vessel and the highest point of the river bottom below the vessel measures at least two feet at Mean Lower Low Water.
- 11. The load bearing capacity of reconstructed or repaired piers shall not exceed that of original or historic design limits.
- 12. Removal of pilings shall be accomplished by snapping or cutting pilings at the mudline, except that pilings may be removed below the mudline if they interfere with installation of new pilings.
- 13. The construction of facilities for the fueling or repair of motorized boats is prohibited.
- 14. Prior to the completion of the construction of any ecological pier, Permittee shall complete and submit to DEC for approval an *Integrated Pest Management* program for the maintenance of ecological piers. The program shall be designed and implemented to minimize the use of pesticides.

End of Special Conditions



DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

Regulatory Branch

APR 19 2013

Subject: Permit Application File Number NAN-2013-00401-ERY By Hudson River Park Trust To Repair Existing Bulkheading / Relieving Platforms in the Hudson River Between Gansevoort Street and Bloomfield Street At Manhattan, New York City, New York County, NY

1. Permittee:

Hudson River Park Trust
ATTN: Noreen Doyle
Pier 40, 2nd floor
353 West Street
New York, NY 10014
(212) 627-2020

2. On April 12, 2013, the New York District of the U.S. Army Corps of Engineers received a request for Department of the Army authorization for maintenance activities associated with the repair and replacement of an existing shoreline stabilization structures, including a total of approximately 425 linear feet of existing bulkhead and relieving platform. The work site is located on the Hudson River at 2 Bloomfield Street in Manhattan, New York City, New York County, New York.

3. The specific applicant-provided details as shown on the attached dated permit drawings are:

a. Station 0+00 (Starting at Bloomfield Street) to 1+73: Replace, in place, approximately 180 linear feet of existing concrete seawall and backfill material by leaving in place the existing stone-filled timber crib-wall foundations and constructing approximately 180 linear feet of replacement concrete-encased steel sheet-pile bulkhead with backfill.

b. Station 1+73 to 4+22: Replace, in place, approximately 240 linear feet of existing concrete seawall and low-level relieving platform foundation with approximately 240 linear feet of 10-foot-wide concrete pile-supported platform and concrete-encased steel sheet-pile cut-off wall bulkheading.

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Bloomfield Street At Manhattan, New York City, New York County, NY

4. This determination covers only the work described in the submitted material. Any major changes in the project may require additional authorizations from the New York District of the U.S. Army Corps of Engineers.

5. Based on the information submitted to this office and accomplishment of any required notification in accordance with the applicable federal requirements, our review of the subject work indicates that an individual Department of the Army permit is not required. It appears that the activities within the jurisdiction of this office could be accomplished under Department of the Army Nationwide General Permit Number 3, MAINTENANCE. The nationwide permits are prescribed at Reissuance of Nationwide Permits in the Federal Register dated February 21, 2012 (77 FR 10184). The subject work may be performed without further authorization from this office provided it complies with the permit conditions listed in Section B, Number 3 MAINTENANCE; Section C; any applicable New York District regional conditions; the following work-specific Special Conditions listed below; and any applicable regional conditions added by the State of New York.

6. Other than the work-specific Special Conditions listed below, the 2013 nationwide general permits in the State of New York, including their final regional conditions, water quality certifications, and coastal zone concurrence statements are available at:

http://www.nan.usace.army.mil/Portals/37/docs/regulatory/geninfo/natp/NWP_PN_30MAY12.pdf

If you require a specific paper copy, please contact our Regulator-of-the-Day at 917-790-8511 to request one be mailed to you. Please be sure to have the above eighteen-character file number readily available when you call.

7. Work-specific Special Conditions:

(A) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized,

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or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

(B) The permittee, and their agents, shall take actions to prevent construction materials, including debris, from entering any waterway to become drift or pollution hazards.

(C) The permittee shall contact the appropriate state and local government officials to ensure that the subject work is performed in compliance with their requirements.

(D) The permittee shall within 30 days of the completion of the regulated activity authorized by this permit and any mitigation work required by Special Condition, sign and submit the attached compliance certification form to this office.

8. Please note that this nationwide general permit (NWGP) verification is based on a preliminary jurisdictional determination (JD). A preliminary jurisdictional determination (JD) is not appealable. If you wish, prior to commencement of the authorized work you may request an approved jurisdictional determination (JD), which may be appealed, by contacting the New York District, US Army Corps of Engineers for further instructions. To assist you in this decision and address any questions you may have on the differences between preliminary and approved jurisdictional determinations, please review US Army Corps of Engineers Regulatory Guidance Letter Number 08-02, which can be found at:

<http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl08-02.pdf>

9. This verification is valid until March 17, 2017, unless the nationwide general permits are modified, reissued, or revoked

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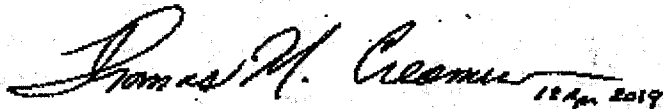
before then. This verification will remain valid until March 17, 2017, if the subject work activity complies with the terms of any subsequent modifications of the nationwide general permits. If the nationwide general permits are suspended, revoked, or modified in such a way that the subject activity would no longer comply with the terms and conditions of a nationwide general permit, and the proposed work activity has commenced, or is under contract to commence, the permittee will have twelve (12) months from the date of such permit action to complete the regulated work.

10. In order for us to better serve you and others, please complete our Customer Service Survey located at:

<http://per2.nwp.usace.army.mil/survey.html>

11. Any inquires should be directed to our Regulator-of-the-Day at 917-790-8511. Please be sure to have the above eighteen-character file number readily available when you call.

FOR THE COMMANDER:

 18 Apr 2013

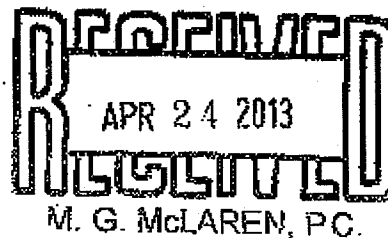
MICHAEL SCARANO, P.E.
Deputy Chief, Regulatory Branch

Encls
As

CF: w/o Encls

New York City
Department of Design and Construction
ATTN: John Ziedonis
30-30 Thomson Avenue
Long Island City, NY 11101

McLaren Engineering Group,
ATTN: Craig Plate, P.E.
100 Snake Hill Road,
West Nyack, NY 10994





PURPOSE: NEW BULKHEAD

DATUM: MANHATTAN BORO DATUM
(MBD)

**GANSEVOORT BULKHEAD
REPLACEMENT**

APPLICANT: NYC DDC
30-30 THOMSON AVENUE
LONG ISLAND CITY, N.Y. 11101

AGENT: M.G. McLAREN, P.C.
100 SNAKE HILL ROAD
WEST NYACK, N.Y. 10994

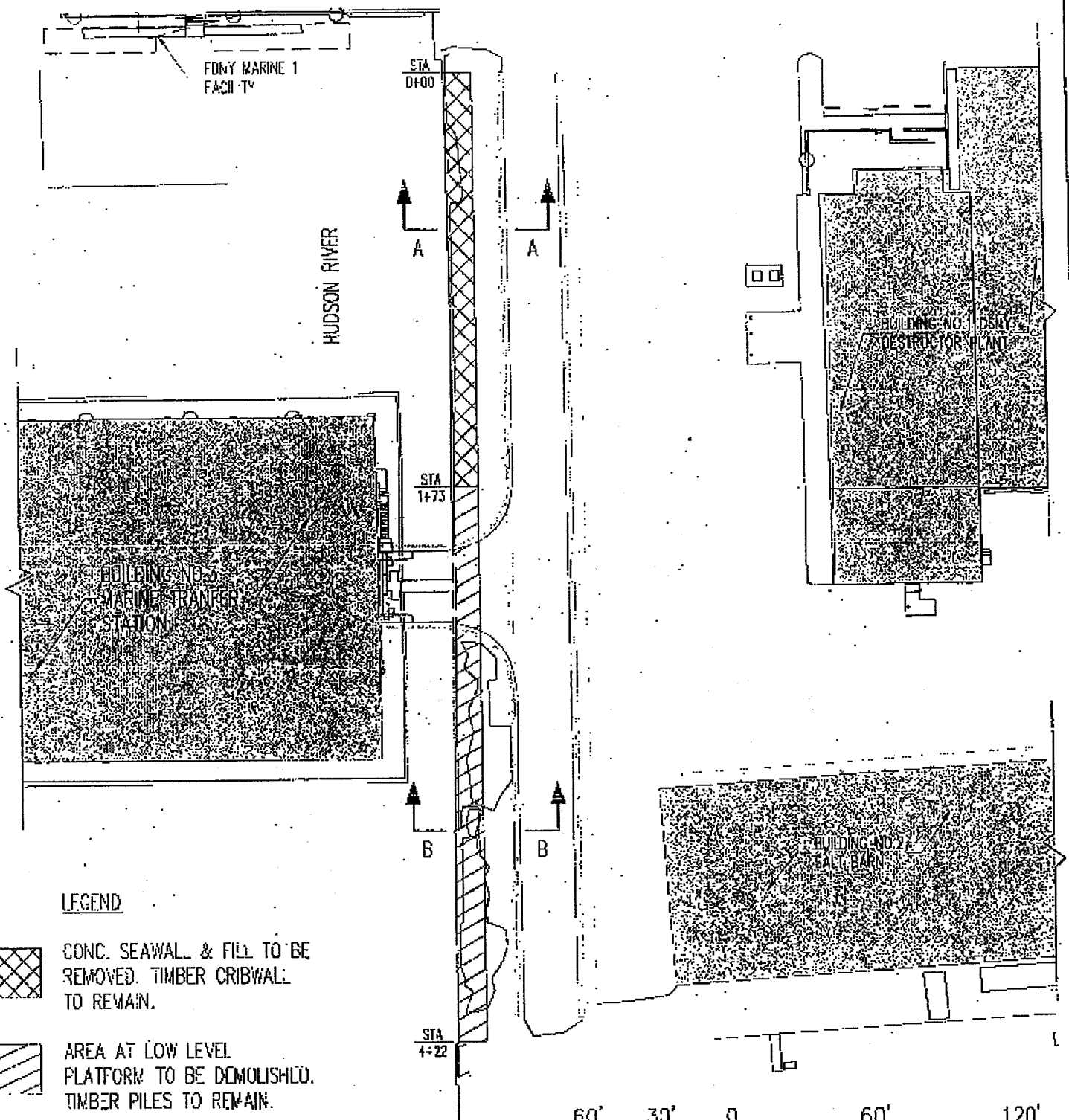
VICINITY PLAN

IN: HUDSON RIVER PARK SEGMENT
AT: GANSEVOORT PENINSULA
COUNTY OF: NEW YORK STATE: NY

APR 19 2013

SHT 1 OF 4

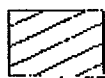
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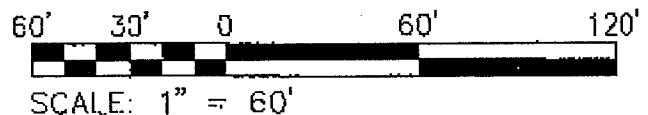
LEGEND



CONC. SEAWALL & FILL TO BE REMOVED. TIMBER CRIBWALL TO REMAIN.



AREA AT LOW LEVEL PLATFORM TO BE DEMOLISHED. TIMBER PILES TO REMAIN.



PURPOSE: NEW BULKHEAD

VERTUM: MANHATTAN BORO DATUM (MBD)

GANSEVOORT BULKHEAD REPLACEMENT

APPLICANT: NYC DDC
30-30 THOMSON AVENUE
LONG ISLAND CITY, N.Y. 11101

AGENT: M.G. McLAREN, P.C.
100 SNAKE HILL ROAD
WEST NYACK, N.Y. 10994

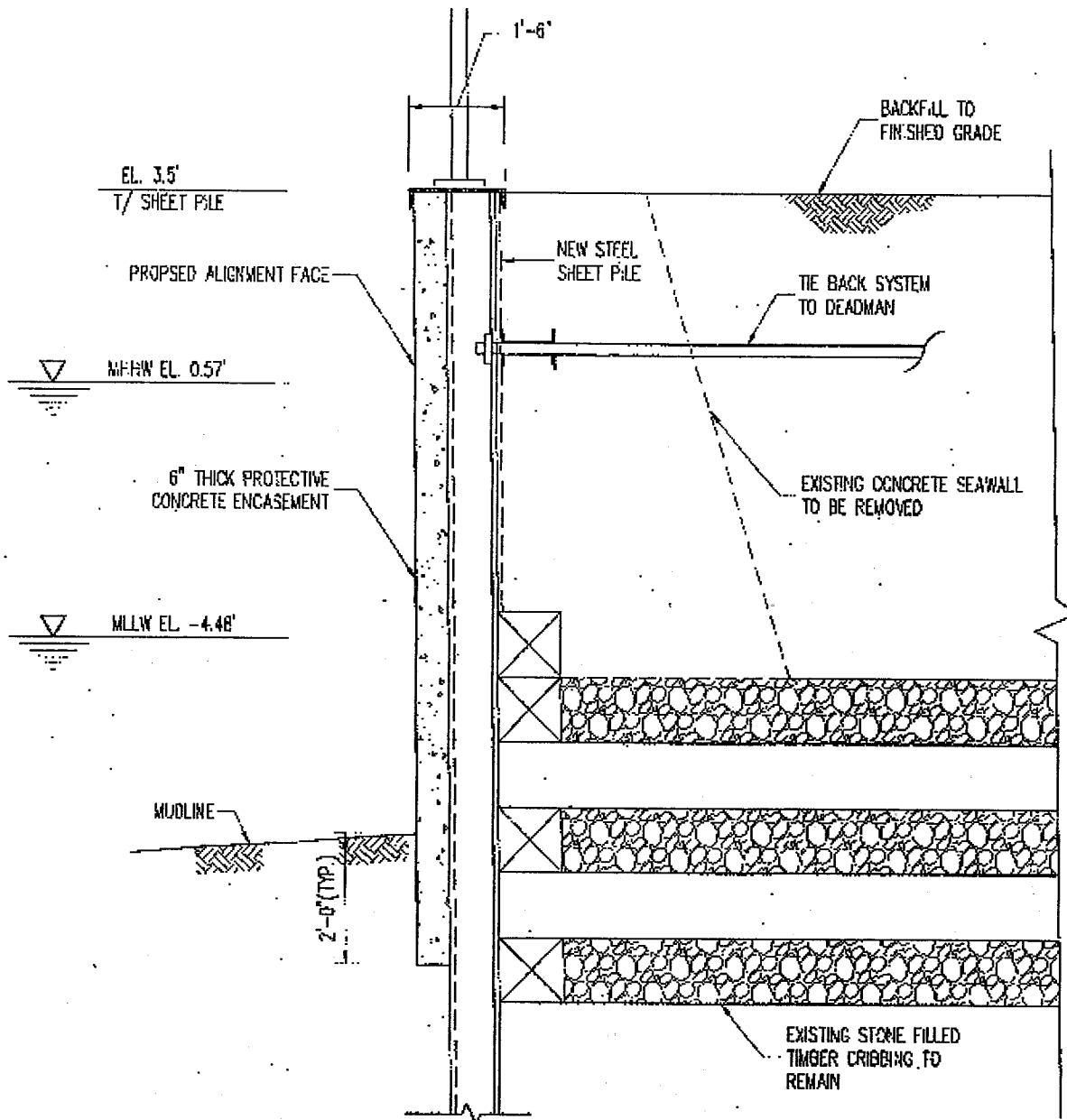
DEMOLITION PLAN

IN: HUDSON RIVER PARK SEGMENT S
AT: GANSEVOORT PENINSULA
COUNTY OF: NEW YORK STATE: NY

APR 19 2013

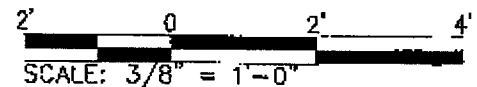
SHT 2 OF 4

04/10/13



TYP. PROPOSED SECTION

(STA. 0+0 TO STA. 1+73)



PURPOSE: NEW BULKHEAD

DATUM: MANHATTAN BORO DATUM (MBD)

GANSEVOORT BULKHEAD REPLACEMENT

APPLICANT: NYC DDC
30-30 THOMSON AVENUE
LONG ISLAND CITY, N.Y. 11101

AGENT: M.G. McLAREN, P.C.
100 SNAKE HILL ROAD
WEST NYACK, N.Y. 10994

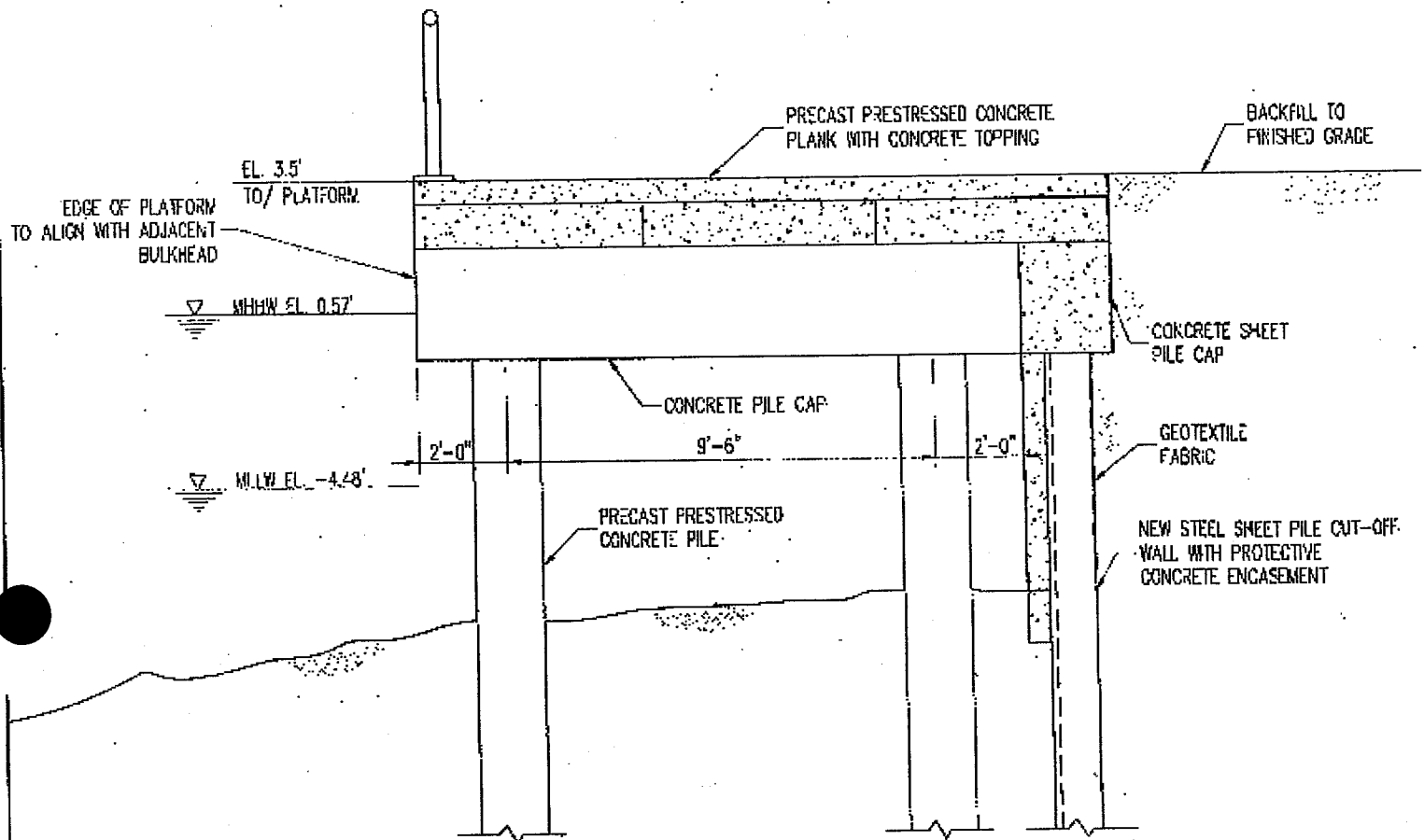
SECTION A-A

IN: HUDSON RIVER PARK, SEGME
AT: GANSEVOORT PENINSULA
COUNTY OF: NEW YORK STATE: NY

APR 19 2013

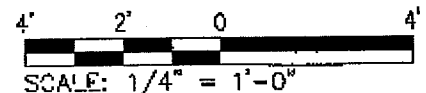
SHT 3 OF 4

04/10/13



TYP. PROPOSED SECTION

(STA. 1+73 TO STA. 4+22)



<p>PURPOSE: NEW BULKHEAD DATUM: MANHATTAN BORO DATUM (MBD)</p>	<p>GANSEVOORT BULKHEAD REPLACEMENT. APPLICANT: NYC DDC 30-30 THOMSON AVENUE LONG ISLAND CITY, N.Y. 11101 AGENT: M.G. McLAREN, P.C. 100 SNAKE HILL ROAD WEST NYACK, N.Y. 10994</p>	<p>SECTION B-B IN: HUDSON RIVER PARK SEGMENT AT: GANSEVOORT PENINSULA COUNTY OF: NEW YORK STATE: NY APR 19 20' SHT 4 OF 4 04/10/1</p>
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FMS ID: S216-404A



**THE CITY OF NEW YORK
DEPARTMENT OF DESIGN AND CONSTRUCTION
DIVISION OF PUBLIC BUILDINGS**

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

Contract for Furnishing all Labor and Material Necessary and Required for:

CONTRACT NO. 1 GENERAL CONSTRUCTION WORK

Demolition of DSNY Facilities at Gansevoort Peninsula

**LOCATION: 4 Bloomfield Street
BOROUGH: Manhattan 10004
CITY OF NEW YORK**

Contractor _____

Dated _____, 20____

Entered in the Comptroller's Office

First Assistant Bookkeeper _____

Dated _____, 20____

